American Cinematographer

A.S.C. MAGAZINE

June 1930

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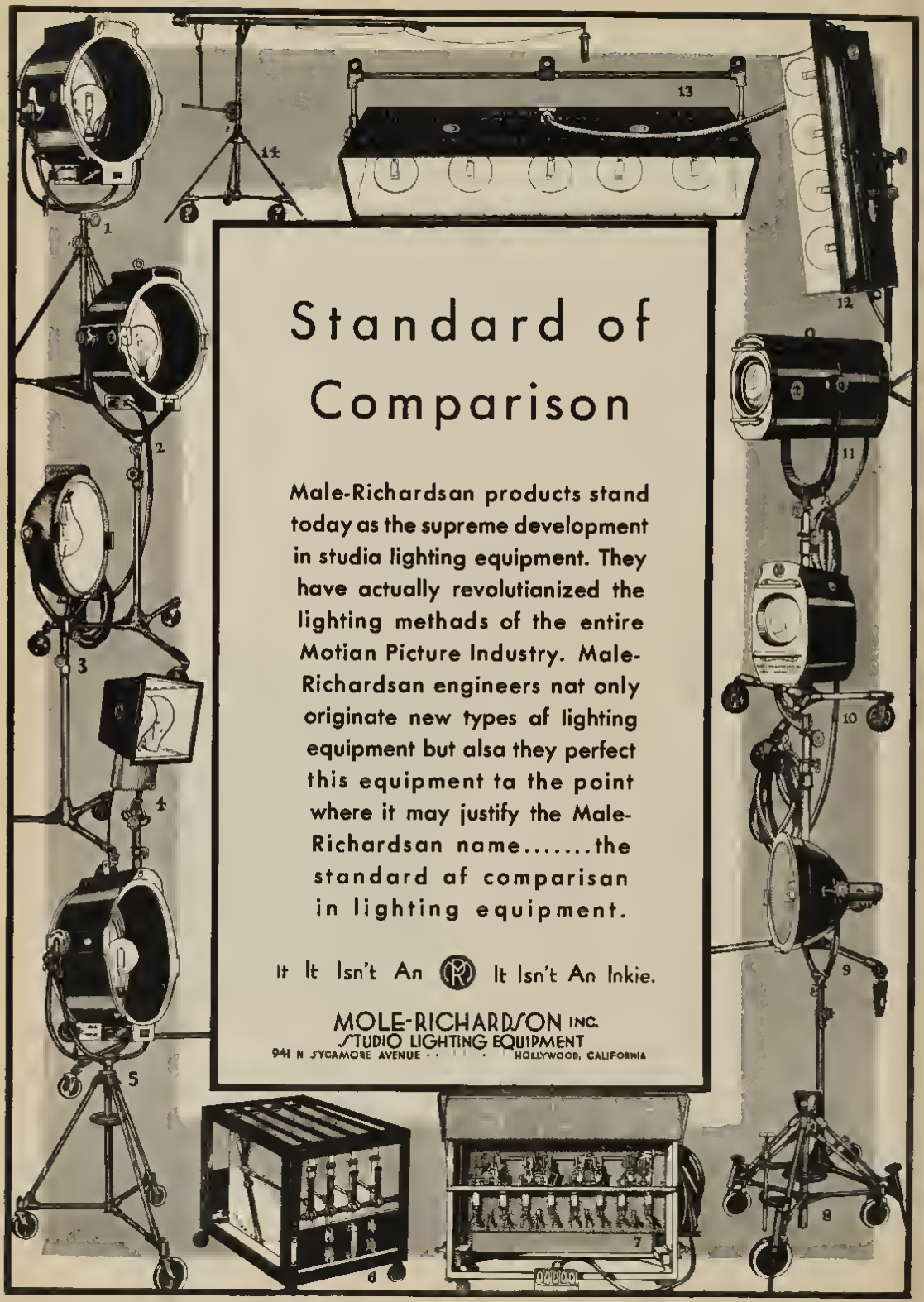

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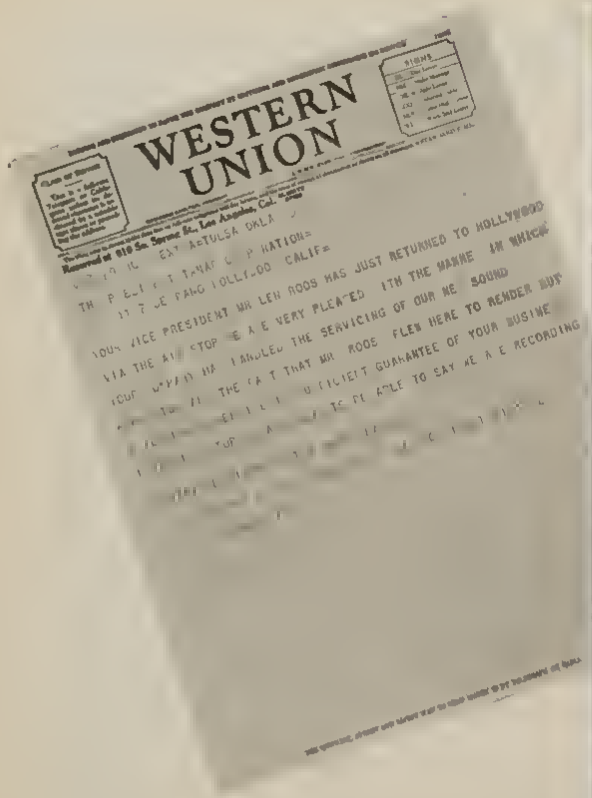
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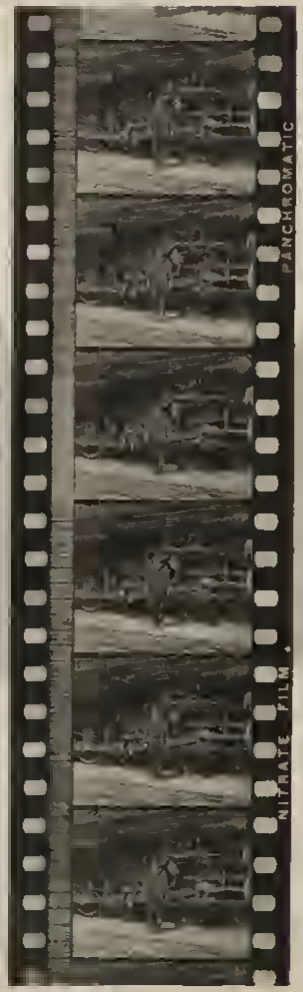

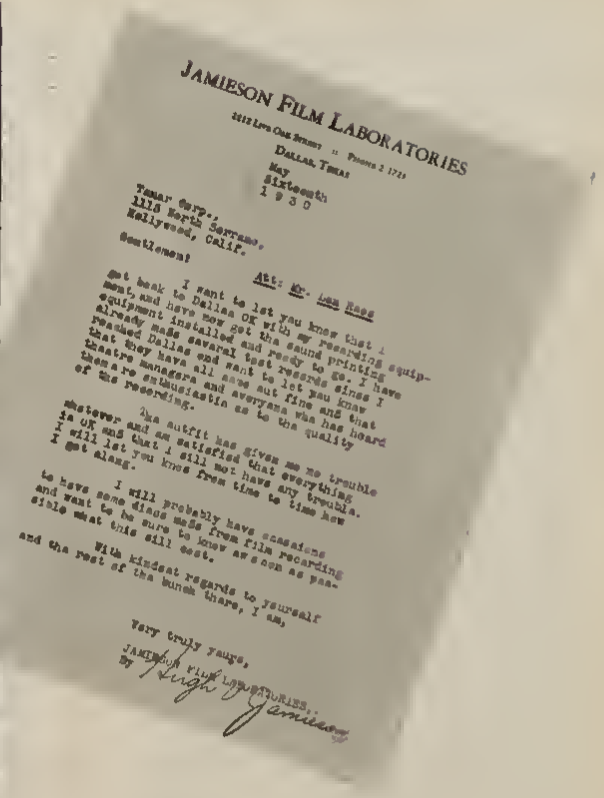
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DALLAS, TEXAS

May Sixteenth 1930

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United States Patent No. 1,407,543
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United States Patent No. 1,362,146
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Application No. 660,583 for U. S. Patent

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United States Patent No. 1,177,697
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U. S. Patent Nos. 1,328,464; 1,299,266; 1,281,711; 1,260,595; 1,569,156; 1,587,051; 1,725,944;
United States Application Nos. 105,066; 174,989
Australian Applications Nos. 19,746; 19,747
Belgian Patent Nos. 360,040; 360,041
Belgian Application Nos. 283,711; 283,712
British Application Nos. 11,620; 11,621
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Patent of Great Britain & Ireland, No. 123,168
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Our patent attorneys advise us that our patents are basic and it is our intention to prosecute to the fullest extent of the law any and all who infringe our patents.

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A scene from Follow Thru a Paramount Picture

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SHOOTING AN ECLIPSE

A. S. C. Man Wins Scientist's Praise

By Lyle Abbott

THE trained cinematographer has exactly the kind of nerves and eyes that an astronomer needs That was the conclusion we reached when we put American Society of Cinematography experts to work alongside of the most highly skilled astronomers at the Mt Wilson observatory eclipse camp at Honey Lake Cal , on April 28 and saw them capture the sun s eclipse in spite of clouds and cold weather

The society was called upon for its technical skill. when it was decided recently that the cinematographer had a proper place in the highest scientific work

The cameras that 'shoot' entertainment in Hollywood studios are now an admitted part of the intricate equipment of many sciences

But it takes man-power to make any camera do its part in adding to the world s store of scientific knowledge

At the same time the cinematographers enjoyed the celestial show and learned a few tricks from the astronomers

The A.S C. man in charge of the photography of the sun eclipse was Charles G Clarke, one of the pioneer members of the society. He was 'loaned' to the astronomical project by the Fox Film Corporation.

Daniel Bryan Clark former president of the American Society of Cinematographers worked hard on the eclipse plan and was largely responsible for the co operation so freely extended by the camera technicians

The eclipse camp was commanded by Dr Seth B Nicholson, one of the world s leading astronomers

Dr Nicholson now has at Mt Wilson the film which depicts the faint shadowy light waves which accompany all solar eclipses due to causes which science never has learned From these observations it is believed a cause can be assigned to the shadow-bands

Astronomers always curious to know the why and wherefore" have been puzzled to know whether the shadow bands are due to disturbances in the air to irregular light from the moon or to the great surging storms that rage on the surface of the sun 93 000 000 miles away

The equipment for the shadow band study consisted of a screen of specially treated glass 6 by 8 feet. and raised on 20-foot poles so that the light of the eclipsing sun fell squarely upon it

Beneath this screen Clarke set up his camera and began recording the phenomenon 5 minutes before totality

The film carried on its sound track the accurate timing of the eclipse because that sound track caught the voice of Dr. Edison Pettit, astronomer calling out the seconds as the scientists worked their telescopes and cameras.

In addition to the purely scientific record of the eclipse Hearst-Fox movietone cameramen recorded the pictorial activities of the eclipse camp for the news releases.

"The material obtained by the American Society of Cinematographers for us is truly remarkable" Dr Nicholson commented after receiving the prints

We have long been aware of the great usefulness of the motion picture camera and the many varieties of sensitive film at the command of the film studios but this demonstrates the use, also, of skilled technicians of the camera craft.

"I am confident that at the eclipse of the sun visible in New England states in 1932 we shall have progressed to the

(Continued on page 44)

Top, Charles Clarke photographing the eclipse. Below, Clarke and group who "shot" eclipse.

THE NEW WARNER BROS. LIGHTWEIGHT CAMERA BLIMP

By Hal Mohr

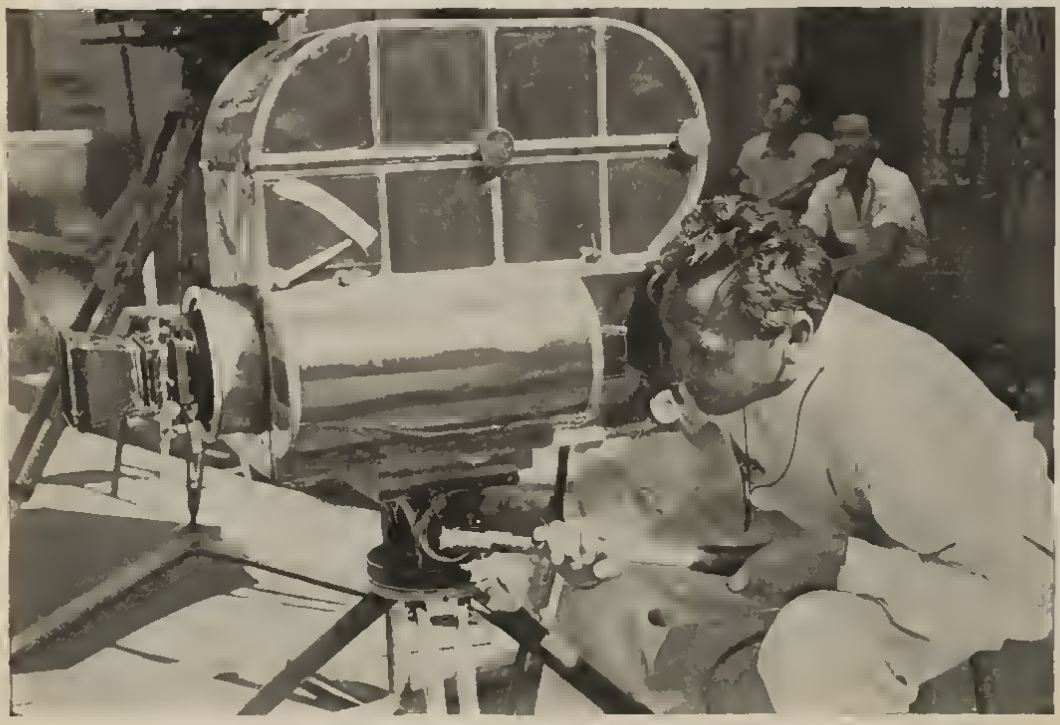
President The American Society of Cinematographers

EVER since the success of the first Vitaphone films started the rush toward talking pictures cinematographers have been learning all sorts of new things about their works and about the machinery they work with. One of the first things they learned was that their cameras which they had always considered remarkably quiet were far too noisy to suit their new colleague the exacting 'Mike.' In other words the pleasantly satisfying purr of a smooth-running Bell & Howell or Mitchell recorded even more strongly than the dialogue of the actors. Naturally this couldn't be allowed, so both camera and cameraman were promptly locked up in a large sound-proof chest, officially termed a camera booth. These booths were quite successful in insulating the noise but they also insulated the cameraman from his colleagues on the set, and as their ventilation was none of the best they forced their unfortunate inmates to work under almost unbelievably bad conditions.

But this element of physical comfort was only one of the lesser evils. Any cinematographer will endure physical discomfort cheerfully enough if he knows that he is getting worthwhile pictorial results. But the booths prevented his getting the best results. Once locked up in his booth the cameraman was out of touch with his colleagues and with the action he was photographing. There could be no last-minute instructions from the director or from the director of cinematography, nor could he have any last minute communication with them. But still more important were the restrictions imposed by the unwieldy size and weight of the booths. They were so big and clumsy that moving them only a few inches necessitated real labor on the part of a large crew of grips — obviously they could not be used for the moving-camera shots which are so vital a part of modern screen technique; once in place their half-ton or so of dead weight saw to it that they stayed so until a small army of men could noisily tug them somewhere else. Furthermore, they were so bulky that the three or four booths necessary to house the many cameras generally used in photographing Vitaphone scenes filled up practically all of the available floor space around the set, making the normal placing of the floor lighting units a difficult matter.

Such a state of affair simply could not be allowed to last. Almost immediately the various interested agencies, in and out of the studios started experimentation along two separate lines of endeavor both of which sought to banish the booth.

The first of these was the creation of a truly silent camera, which would no longer need any sound-proof insulation whatsoever. This is proving a difficult task as is attested by the fact that while tremendous strides have been made no camera silent enough to be used un-insulated under all circumstances, has yet been made. But while the task is difficult it is not by any means impossible; the present lack of complete success only indicates that such a tremendous problem requires more time for complete solution. With so many expert engineers working on it, it is very probable that it will be fully solved within the present year. *(Continued on page 22)*



Hal Mohr using the new Warner Brothers' "Blimp"

A NEW "BLIMP" FROM PATHE

By William Stull, A S C

WHEN the special sub committee of the Producers' and Technicians Joint Committee of the Academy of Motion Picture Arts and Sciences turned in the final report of its investigation of the sound insulating capacities of the various camera coverings used in the industry, it was announced that one of the highest ratings for efficiency had been given to the newly perfected 'Blimp' used by the Pathe Studio

This 'Blimp" is the joint design of L E Clark Technical Director of Sound for the Pathe Studio and Farrell Redd superintendant of Sound Maintenance for the same organization while the construction of the device was supervised by Joseph Wright who before joining the Pathe shop force had had many years of experience in the construction of soundproofing devices for submarine and aerial telegraphy in the United States Navy.

Front view of New Pathe "Blimp"

The "Blimp" itself depends upon laminations of sheet metal and acoustic felt for its sound-absorbent qualities Being thus inevitably of heavy construction the 'Blimp" has been made of such ample size as to give the cinematographer abundant room for access to all parts of the camera within In appearance the Blimp ' eesembles a good-sized chest neatly finished in black Fabrikoid to eliminate the possibility of undesirable reflections from the set lights etc and fitted with a large rectangular window in front The entire left hand side is hinged so that it drops completely down giving perfect access to the camera, while the rear panel is removeable, to facilitate focusing etc Large glazed ports are provided in these doors so that when the camera is locked up and in operation it may still be observed A similar port is placed on the right hand side so that the operation of the take-up mechanism can be checked at all times Just below this port is the motor-switch and an automatic, electric clutch which stops the camera at the slightest indication of a buckle

Inside, the camera is mounted on a completely insulated base which prevents any sound or vibration from being transmitted from camera to blimp or tripod, or *vice versa* Any camera may be used, and any type of motor The arrangement of the camera's accessories—matte-box finder, etc — is not in the least changed for use in this Blimp The matte-box remains inside the Blimp," fitted directly to the camera's support in the conventional manner It may be adjusted quite as though no Blimp ' were being used Access to it is gained through the unusually large optical glass window through which the picture is photographed this window is hinged to swing upward where it is entirely out of the cinematographer's way and leaves an opening approximately one by two feet in size through which the filters gauzes, etc, may be freely reached for adjustment The unusual size of this

Pathe's new "Blimps" in action on Pathe lot

window makes possible the use of extreme short-focus lenses, while its separation from the camera is such that lenses of a considerably longer focus than is usual may also be used without removing the matte-box and without other inconvenience The focus of the lenses is adjusted by means of a lever protruding through the bottom of the Blimp which operates against a scale upon which the settings for several lenses may be calibrated The finder remains in its accustomed position beside the camera and inside the Blimp, ' it uses the same large window that the photographing objective does and it is easily observed through an ample porthole in the rear door of the case which being more than three inches in diameter allows an unrestricted view of the finder at all times

The framework of the Blimp" is angle iron On this is built up the sound-proofing shell which consists of an outer layer of aluminum sheathing a layer of acoustic felt a layer of sheet lead, and a further layer of the acoustic felt The joints around the openings are of course insulated with moulded sponge-rubber This construction gives a remarkable degree of sound-absorption, having been measured by the Academy s engineers as better than 21 decibels In actual practice these Blimps ' are markedly superior in sound-absorption to the booths generally used The writer recently stood between a conventional booth and one of these ' Blimps" during the filming of a scene although he could easily detect the noise of the camera working in the former he was unable to detect any sound of the camera operating in the Blimp

Obviously such a construction cannot but create a heavy Blimp ' for which the conventional wooden tripod would be entirely inadequate Therefore the Pathe engineers working in close cooperation with the Mole-Richardson experts have adapted the already famous M-R Rolling Tripod to the requirements of their device As used in the Pathe Studio this tripod is made in three progressively overlapping sizes from a ' baby ' to one large enough to raise the camera well above the eye-level of normal people As the tripod head is removable and interchangeable the entire assembly may be quickly shifted from one to another of these bases as may be necessary Furthermore, a special ' top-hat ' has been evolved for use with the device giving the new "Blimps' the same range of supports as was available with the lighter designs of former days So perfectly balanced are these units, that despite the fact that the Blimps ' and camera weigh better than three hundred

View of new "Blimp," open showing interior

Cross section of sound-proof material used in new "Blimp"

pounds, they may be handled with the same ease and freedom that characterized the cameras of silent times The pan-and-tilt movements may be operated by large, convenient cranks, or they may be disconnected and used as ordinary free heads For this latter use the Blimps are fitted with two arms one at the lower left-hand corner of the case, and one, inclined at the upper right-hand corner When used thus the perfect balance of the units is attested by a facility of movement amazing in devices of such size and weight

Our earlier experiments" says Mr Clark showed conclusively that if we wanted silence we would have to pay for it in weight and bulk So we adopted the present laminated construction which has proven thoroughly satisfactory Once that had been decided upon we knew what to do to attain the ends desired by the Sound Department The needs of the Camera Department were to us, another matter We didn't know just what they wanted So we went to the men behind our cameras and asked their views, and then tried to embody as many of them as possible in a design that would still satisfy the microphone The reception given the final design certainly seems to indicate that the cameramen are pleased, for since the first Blimp made its appearance on the lot the shop has been crowded to the limit in turning out others to satisfy the demand from the boys in the booths.

' An interesting feature of the evolution of the device is the fact that, from the time the appropriation for their construction was granted to the appearance of the first one on a stage but ten days elapsed This period embraced both the design, construction and testing of the Blimp ' In creating this design Mr Redd and I found that the greatest, and most interesting problems lay not in the larger features of the design but in the details For instance there was the matter of getting the proper clasps to close the doors We surveyed the field very thoroughly and could find none available which would be simple, quick-acting and positive So we shut ourselves up with our thoughts and a drawing-board, and finally evolved our design which satisfactorily met all our requirements It consists of a long curved finger operated by an eccentric cam arrangement, controlled by a short lever Another little detail which we are embodying in our latest models is a set of clamps beneath the Blimp ' into which the 'grips' can slip a length of rope and thus have an easy means of picking the thing up like an old fashioned sedan-chair, and moving it about the lot or from tripod to tripod

But perhaps the most impressive thing connected with the evolution of this Blimp' is the wonderful cooperation between the camera and sound staffs which enabled us to build a device which is so satisfactory to both It is significant of the new spirit of the industry which in its larger aspects has been shown in the general cooperation which has made such achievements as the Academy s Sound School and these latest equipment tests possible Let us hope that this is just a beginning for with such a spirit of cooperation in the technical branches of the industry we can rise to new heights and solve our common problems faster and better than ever before"

New Microphone Device Developed by Carl Dreher

A NEW device known as the RKO Beam microphone so constructed that it brings sound to a focus for recording and yet keeps extraneous noises to a minimum has been developed by Carl Dreher engineer in charge of sound recording for RKO It is operated by hypothetically casting a beam in which certain sounds are picked up to the exclusion of all other sounds not originating within the beam, and can be directed from behind the camera thus keeping out of range of the lenses at all times

SPRING MEETING OF S. M. P. E. HELD IN WASHINGTON, D. C.

Delegates Received by President Hoover

By Will Whitmore

WITH more than 200 members and their wives present the Spring Meeting of the Society of Motion Picture Engineers held at the Wardman Park Hotel, Washington D C May 5 8 was the greatest of the 28 meetings held thus far in the history of the Society It was a success from every standpoint from the importance of the papers read the banquet and other forms of entertainment the showing of special motion pictures and the movietone addresses made by many of the leaders in the industry.

Of such interest and importance were the papers that long discussions followed practically every paper read making it hard to keep up with the schedule and necessitating holding the last day s meeting until late in the afternoon

Probably one of the outstanding features of the Convention was the banquet, at which 300 people were present All speeches at the banquet were broadcast over the Columbia chain of 33 stations and from the many reports received after this broadcast it is known that it was received throughout the country with unusual interest Mr Will H Hays was the principal speaker with President Crabtree C Francis Jenkins and Master of Ceremonies, William P Connerry Jr , Congressman from the 7th District of Massachusetts also contributing splendid addresses.

J I CRABTREE

Another splendid attraction at the banquet was the addresses by sound film given by such leaders of the industry as Wm de Mille J E Otterson David Sarnoff, George Eastman Harold B Franklin Harley Clarke, Harry Warner, Peter Mole and others These pictures were made especially for the banquet and to those present it seemed as though the speakers were actually present in flesh and blood Here was a concrete example of a new way in which a sound film may be used, a product of the work of the very men who enjoyed it at the banquet

On Wednesday afternoon the entire body boarded 10 large motor busses and went to the White House to meet President Hoover Following this the group stopped at the Arlington Cemetery and then motored on to Mt Vernon to visit the home of our first president This sigbt seeing motor trip was one of the most enjoyable events of the meeting although the extreme warm weather proved fatiguing to many.

While the members of the Society were earnestly in session each day wives and friends of the members were entertained by Mrs Walter E Prosser who acted as hostess to the women throughout the meeting On Monday afternoon Mrs Prosser held a charming bridge party for the women at the hotel

(Continued on page 26)

President Hoover greete S. M. P. E. members on White House lawn

TENDENCIES IN THE CINEMA

By Harry Allen Potamkin

SEVERAL positive tendencies are operating in the cinema toward the compound the reflective and toward a new logic The futile defense of the mute film evinces—or evinced, the defense being quite muted now—a failure to recognize the inevitable nature of the cinema as a form in evolution Art has long been seeking to compound the simple Twentieth century art records innumerable hybrids that could not survive nor propagate The artists of Der Sturm like Archipenko sought to send the flat surface into space, sought, that is to wed painting with sculpture Dynamism was an attempt to add mobility to graphic and plastic. The theatre of Europe, echoing outre-mer has—in its more adventurous milieus—been attempting to multiply itself indeed to cinematize itself What is the Joycean method if not a desire for the compound? Lance Steveking writer, and Francis Bruguiere, photographer have endeavored to compound the photograph with the word These are aspirations against the medium and toward another form the cinema The cinema was born in the age of the multiple Years hence a Joyce will not think of attempting his compounds with words He will go into the cinema, which unifies the verbal and the oral with the visual and ultimately the spatial Color and tones with music speech and typography—planes with solids, framed areas with images floating in space

The cinema is by nature of its potential structure a compound form The Russians have established montage, the arrangement of the images into a progressive structure, as the method of cinema unity, Montage enables, by its principle of organized motion (rhythm), the mounting of the verbal legend (caption) and the utterance (audible speech) into the unit of the film, so that the motion-picture becomes the justification of its diverse utilities Having found a method for the compound the cinema establishes the compound out of the hybrid

Basically the film is a progressive medium like music literature the theatre the dance Progressive mediums are performing mediums, as contrasted to painting and sculpture and architecture—shall we call these 'frozen' mediums intensive mediums? But within the progressive there is also the intensive That is why the cinema has not negated the suggestions of painting and sculpture 'The Passion of Joan of Arc" is a beautiful instance of the structural presence of the graphic and the plastic in the cinematic Having exploited the literal muscular film to its ultimate—the Russian film has thus fulfilled the American—the seventh art finds it urgent as Eisenstein has said, to utilize the 'reflective processes' A number of causes are at work toward this intellectualization of the film First the natural development out of the immediate impact film, second, the insistence of criticism in the subject-matter of the film (the Russian influence at the moment), third, the increased sensitivity of the physical medium (panchromatic negative light etc), fourth, the need for intensification to consolidate the components of the compound

The film is the most intensifying of mediums It concentrates hours into moments more resolutely than does the theatre or the novel It concentrates the image *boldly*, bringing forth every particle to the apprehension of the experiencer It can move facilely in space and back and forth in time with a minimum of burden Intensification is physically the method of intensiveness 'The Passion of Joan of Arc' is the most intensive film yet realized and every detail of it is a portion of and a contributant to that intensiveness "Arsenal' is intensiveness expressed in the accumulation of forces in the stationary body "The Old and the New' (The General Line) is intensiveness of this order cooled by Eisenstein's objectivity The *idea* of intensiveness is reflection The Russians have tried heroically, in the past failing momentarily but now succeeding consistently, to convey this idea in the symbol which is the intensification of an extensive reference in an object of immediate reality The failure was due to the employment of this reflective instrument in a non-reflective structure the culmination of the film's first technique the physical or American

The establishment of a reflective structure is inevitable The subject matter of the Russian kino creates a form which will support the critical intention The cinema save in the brief instance of the Swedish has never before dared criticism It has been dramatic, whimsical, lively, has achieved pathos and even, as in Feyder's rendition of Zola's 'Therèse Raquin' tragedy, but tragedy without extensive reference The Russian film is propelled by criticism, and that explains its vitality There can be no propagating art without the impulse of criticism There can be isolations as in France, there can be the momentarily effective, as in America but for a cinema permanently great, strong and productive there must be criticism The conversion of this criticism the social theme, into its form is art, cinema Form is the conception constantly *informing* the structure The Russian film alone moves toward a permanent form It is not likely that the American film far removed from whatever critical center there is in the United States, will approximate, for some time to come, more than a style or a manner And not until there is a release of the fuller, suppressed social energies of our land will there be realized a cinema of which the movie rudimentary art, hints We are yet too long so, in the era of the legend and the myth We come no nearer to criticism, to art, than the symptom of the environment and that environment at its lowest level of ideology and experience I believe however, that the years will bring them this change of production locale and the release of the social meaning creative, energies

The necessities of the critical subject-matter and the reflective processes have been evolving a new logic of cinema construction The logic of film-construction is termed "continuity" The very word suggests the matter-of-fact arithmetic or geometric literal sequence of the American film progression Griffith created the 'flash-back' a diverting of the progression by means of a subtraction or fractional intrusion but since the American film remaining muscular literal and sentimental could not see the structural significance of this device it remained as merely a part of the practice of 'cutting.' Russia re-studying the film at its source developed the Griffith technique and established montage as cinema construction The flash-back has become a paramount instrument within montage In "A Fragment of an Empire' it is the pivot of the rhythmic structure

Beginning with this structural establishment of a device the film could advance in its hunt for a language and get as far as the figure of the speech The old logic of 1 2 3 or 2 4, fi, the episode following episode like a child's tale or an elementary melodrama was broken up It is being broken up constantly In "Arsenal" we find the new logic having attained to a non-logic—if we think in terms of sensible verbal cogitation—by means of juxtaposition of images not immediately leading out of one another but producing a total conveying idea and form fluidity Elsewhere films have been made in a logic of images freeing itself from the logic of words (from which so many writers are struggling to free themselves only bewildering themselves the more), but the practices are, for the most part either documentary (as in the composite newsreel 'Berlin") or effetely fanciful an *atelier* experiment, as in France However though there are not so vital or influential or motile and generative as the Russian work, they support the tendency of the cinema away from literalism bluntness the non structural the insensitive contradictions of the intrinsic evolving cinema The new logic relates historically to the earliest modifications of the literal in the "angle-shot' (a structural point of view) the multiple image and the impression of image upon image and the magician's virtuosity of George Melies in the '90s But America literal-minded rudimentary-minded which rejected these modifications of the literal or as in the case of the angle blundered with them now accepts them in the new "virtuoso" film the movie revue as 'stunts' The structure of the film is far from the mind of Hollywood and will be as long as the mind of Hollywood is composed of the non-critical mentalities of America Indeed, Hollywood is bewildered by the evidences of the cinema's positive tendencies toward the reflective, toward

(Continued on page 44)

ASSOCIATE MEMBERSHIP DEPARTMENT CREATED BY A. S. C.

Emery Huse and Fred Gage First Members Taken in New Branch

ONE of the most important moves in the history of the American Society of Cinematographers was made last month when the society established an Associate Membership branch which will enable it to place on its rolls the names of outstanding men who, while not actual cinematographers are contributors of vital importance to the art

This matter has been under discussion for the past year but no definite action was taken until last month when the board of Governors acted on it and the society overwhelmingly voted in favor of such a membership branch Those who become associate members will enjoy all the privileges of the Society except that they shall not vote hold office or share in the Society's assets or liabilities Associate membership may be extended to those who while not active cinematographers, perform work essentially of a cinematographic nature and are not directly connected with the manufacture and sale of cinema apparatus

The first two Associate members taken into the Society were Emery Huse of the Eastman Kodak Laboratories Hollywood and Fred Gage of Warner Brothers laboratories, Hollywood

Another Active member was also accepted last month by the Society He is Philip W Chancellor, noted for his unusual work in photographing rare animals and plant life in various parts of the world Mr Chancellor heads the noted Chancellor-Stuart Expeditions which periodically journey to the far corners of the earth seeking scientific photographic records which have been turned over to the Field Museum of Chicago Mr Chancellor has just completed the filming in the island of Flores of an almost extinct form of lizard This film has not yet been turned over to the museum but was shown in part to the A S C members at a meeting on the evening of May 26 Mr Chancellor is now completing arrangements for another scientific expedition to the South Seas which will keep him there for more than a year

Organization plans for the present year were completed by the new President Hal Mohr during the past year An extensive program has been planned and an active year is expected The following committees were appointed by President Mohr

Public Relations Committee J A Dubray Chicago Georges Benoit Paris H T Cowling Rochester N Y Claude Mc Donnell London John Dored Riga Harold Sintzenick Bombay India No chairman was appointed the President will direct the activities of this committee

Research and Education Committee John F Seitz

Membership Committee Fred Jackman

Production Committee, Daniel B Clark

Social and Entertainment Committee John W Boyle

Program and Exhibition Committee Al Gilks

It will be noted that with the exception of the public relations committee all the committees are one man committees President Mohr took this move because he feels that if one man has the responsibility of a particular job he will function more satisfactorily than would a group It will be an interesting experiment

The following Board of Editors to co-operate with the Editor of the *American Cinematographer* was appointed William Stull H T Cowling and Ned Van Buren Two of these members were on the board of the past year

The first general meeting of the Society under the new administration was held at the Eastman Kodak Laboratories on Monday evening May 26

This meeting was a tremendous success On the program were the following features Dr L M Dieterich, who is developing a new lens gave a screen demonstration of the results obtained Mr Chancellor gave a screen showing of part of his latest scientific film taken on the Island of Flores Len Roos, another member gave a demonstration of results obtained with his portable sound recording device which he has developed and which is being made and marketed by the Tanar Corporation of Hollywood Mr Zeno Klinker a Los Angeles man whose hobby is assembling a complete motion picture history of the development of aviation, then showed 9000 feet of the most remarkable film ever put together It was a history of aviation from the days of the Wright Brothers first experiments right to date and included the record of the Graf Zeppelin's world flight and every aviation event of intetest More than fifty members were present and all acclaimed the meeting as one of the most interesting they have yet attended

Plans are now under way for the disposal of the present club rooms and offices and for the acquiring during the coming year of a club house. More details regarding this move will be published in a later edition of the magazine

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Service for Tanar Corporation's Customers

PROVING that "Service" is more than a mere slogan on the part of the Tanar Corporation. Hollywood manufacturers of portable sound equipment Len Roos vice president and general manager of this concern hopped an airplane recently and journeyed to Tulsa, Oklahoma when he received word that a customer was a bit puzzled over the workings of the equipment

In a few hours after receiving the word Roos was on the scene much to the surprise of President Thomas J Edgar of the Mid Continent Pictures Corporation and in a few minutes had everything straightened out and was on his way back to Hollywood

"We aim to give the best service in the United States" says Roos on his return "No equipment is worth anything unless there is a personal service behind it We will always give that service You see our customer in Tulsa didn t quite know how to hook up so we showed him in person and tried to save him all the time we could

Roos who is a member of the American Society of Cinematographers for years was a globe trotter cameraman He came back to Hollywood when sound came in to find portable equipment to take with him He couldn't find what he wanted so devised it himself so successfully that he is now a manufacturer

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New Swiss Color

THE natural color film problem has been solved by a recent Swiss invention states the Swiss Cinema a trade magazine A color film produced according to the new process was recently demonstrated the colors appear to be absolutely natural and give a greater impression of plastic than was ever produced by a black and white film The new invention does not imply either technical or financial difficulties it is merely a completion of the black and-white film Films produced according to this process can be projected over any ordinary apparatus and copied and developed along the usual lines There are no moving color edges which are so dangerous in other existing color-film systems and the color scale is extremely rich Further advantages are the complete interchangeability of color and black-and-white films both in recording and reproducing normal frequence of pictures at the recording, normal source of light during the projection: no difference of price as compared with the black-and-white film. A Swiss color film is being produced now according to the new system

AS THE EDITOR SEES IT

Amen!

SOMEONE should present our good friend Jack Alicoate editor and publisher of *Film Daily* with a nice gold medal or some other suitable award for his recent comment in his excellent paper on laughter in the movies We think so well of it, and agree with him so fully that we give you his editorial in full This writer has been squawking for a long while, maybe they'll listen to Jack

"Take away the bare legs if you will" says Jack Discard the enticing and enthralling music Throw out the million-dollar ensembles Kill the greatest love scenes and thrills ever cinematized, but don't, please don't we are pleading with you, Jim, please don't take away the laughs What has happened to the laughs that should be coming from Hollywood probably nobody knows except the income tax collector This much is certain: Eighty per cent of the so-called current crop of cinema comedians haven't enough punch to put a dent in a cup of jello, and their screen demeanor in quest of the elusive chuckle is in most cases, as humorous as an embryonic acrobat trying to sing love ballads on amateur night

"It surely cannot be that our highly paid and artistically inclined production executives have entirely and collectively lost their sense of humor Most of them have been in the picture business too long for that. It surely is not the lack of human material of proven laugh-making ability for Hollywood overflows with the best comedians the New York stage has to offer for, Oh so many years What is the trouble then? In most recent big talker productions and we could name a dozen off hand the comedy has been a combination of manslaughter mayhem and murder And let us gently suggest to you Mr. Producer, just at this point the following thought Ninety per cent of those who go to pictures go to be amused They want and MUST have laughs

"It might possibly be that the main difficulties lie in the proper or improper timing of laughs for this new electrical entertainment. It has been suggested that writers of original laugh material are scarce This can hardly be true as Hollywood is full of them and there are not enough golf courses in Southern California to take care of all of them at one time They can't all be away fishing Perhaps the directors of our latest barker operas are respectively without a funny bone but ye gods, it cannot be that they would all go tragic and esthetic at one and the same time Whatever the matter we are hereby registering our squawk along with that of some 115-000 000 other Americans who believe in smiling and will gladly become a charter member of the Bring Back the Laughs movement and hereby and to wit agree to do our bit for the cause by devoting time stamps and marbles if necessary

Censors

THIS writer has always found it extremely difficult to figure out just why there has been so much censorship of motion pictures while stage plays have gone on and on to limits that really keep some of us away from the theatre

We have yet to see a motion picture that contained anything that would contaminate us On the vaudeville and legitimate stage we have listened to alleged jokes and smutty conversation that turned our hard-boiled cheeks crimson Yet aside from an occasional flutter of hot air from the lips of city fathers here and there, there has been but little done about it However the world and his wife seems to take it upon themselves to watch the industry that has been clean throughout the years The stage has never done for civilization what the movies have done Why oh why, can't the world let pictures alone especially when those in power do as much as Will Hays and the producers are doing and always have done to keep pictures healthy?

"Hell's Angels"

HOWARD HUGHES, youthful producer, again has proven to the old-timers that he knows how to make real pictures In "Hell's Angels" he has turned out a production that will go down in history as one of the most remarkable air pictures ever made It is really difficult to visualize any picture of the future being more spectacular in the matter of aerial scenes Hughes seems to have reached the limit of all aerial possibility

For close to three years we have been hearing of "Hell's Angels." It has been made and remade casts have been juggled and directors have come and gone But Hughes had an idea, and finally he stepped in and did his own directing and what a job he did! Of course there are things that should not be What picture hasn't? But Mr Hughes deserves all the praise that is being showered upon him.

And one of the reasons this picture is so wonderful is because Mr Hughes surrounded himself with competent cameramen Those air scenes which lift you from your theatre seat were photographed by cameramen who were up there following on the tail of each ship, with camera ever trained on the action Courting death daily, these cameramen never faltered Under the direction of Gaetano Gaudio A S C, in charge of the studio photography, and Harry Perry A S C, in charge of the aerial photography a force of thirty cinematographers gave their best—and the results speak for the quality of their work Truly wonderful photography! All the critics have given unstinted praise to the cameramen in their reviews of this picture, for all realized the big part these men played in making it a success

New Audiences

DIRECTOR William A Seiter one of the keenest men in the picture business speaks words of truth and wisdom when he says in an interview elsewhere in this magazine that the talkies have been the salvation of the picture business

We all recall the rather gloomy days of the business just before Warner Brothers gave us the first Jolson picture which turned the picture business upside down Theatre owners were going broke, audiences were dwindling studios were having hard times, Hollywood was in the doldrums and the outlook was anything but pleasing to all And then came the talkies and untold thousands of new picture patrons started flocking to the theatres Today the business is healthy and the future is as rosy as a Spring morning

Filmo Topics

BELL & HOWELL are deserving of congratulations for the excellent manner in which they are producing their monthly magazine "Filmo Topics" The May number with its new 'dress' is one of the most attractive little magazines that has come to these offices for some time And it contains so much useful and entertaining information for the home movie maker! Mr Stanley H Twist and Mr Edwin A Reeve Executive Editor and Editor respectively, surely are doing much to assist the users of their equipment and are doing it in a dignified and artistic manner

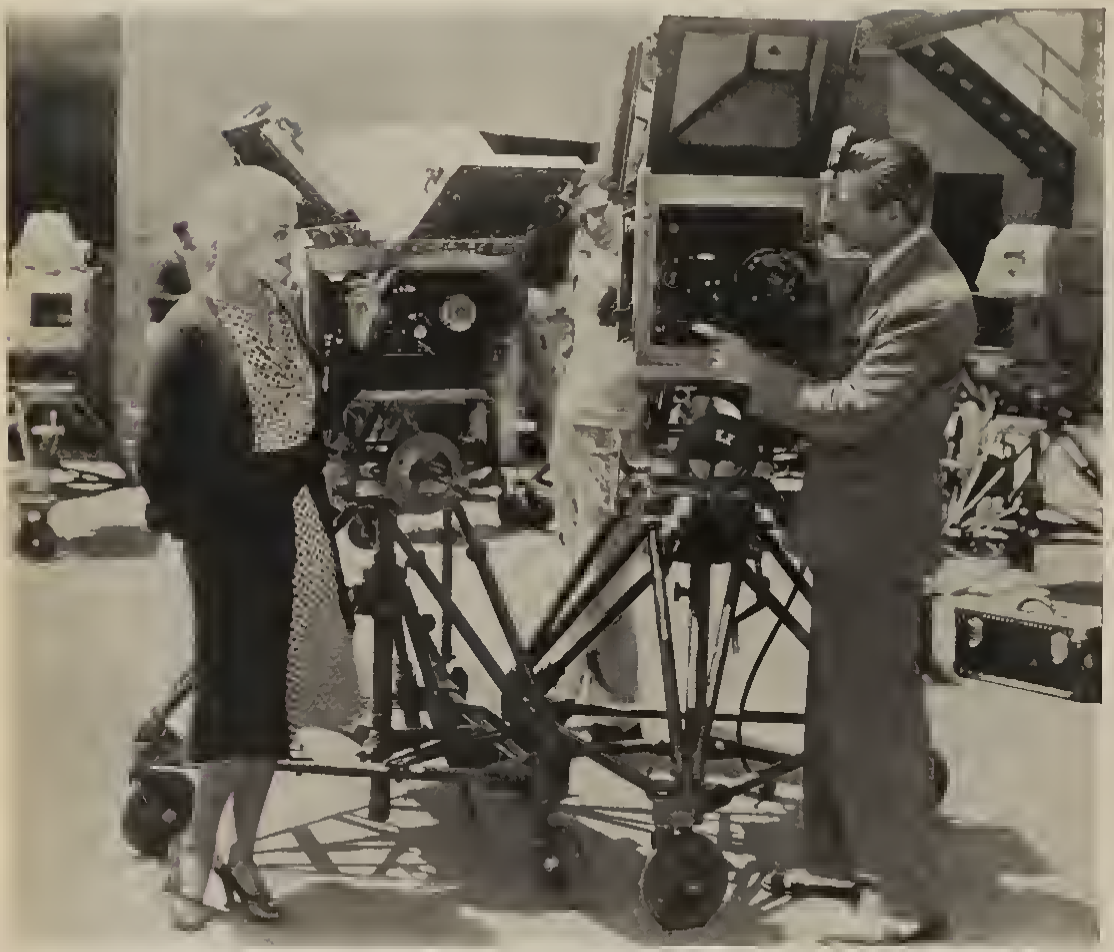
Contributions

WE have been thinking of late that many of our readers must have had unusual experiences and adventures in their wanderings about with either standard or 16 millimeter cameras These experiences make very entertaining reading, So right now we invite all readers to become contributors to this journal if they so desire Perhaps you may have been forced by circumstances to devise some "makeshift" method of doing something in a far-off land That experience might help another So send along either suggestions or articles There is nothing so interesting or entertaining as human experiences

I SAY TOM IS YOUR AIR INSURANCE PAID UP — AND DID YOU PICK UP THE EXPOSED NEGATIVE
NO- BUT I GRABBED THAT NEW 3½ INCH LENSE AND THE CINEMATOGRAPHER MAGAZINE
BANG
WHOA
BOY OH BOY THIS IS THE CANDY SHOT
POKE YOUR LENSE OUT THE OTHER SIDE AND WE'LL SLIP A LITTLE
I WONDER IF I'LL HAVE TO WALK VERY FAR
YES SIR YOU'VE GOT TO HAND IT TO THOSE A.S.C. CAMERAMEN FOR GOING THRU HELL AND THE TOUGH SPOTS — THEY GO UP AT ANY TIME AND IN ANY OLD CRATE AND BRING BACK SHOTS THAT LOOK MORE REAL THAN WE MAKE 'EM
MY GOSH! I FORGOT TO LOOK IF THIS OLD PARACHUTE HAD A POLL RING PUT ON
WISH I'D HAVE PUT IN A MINUS BLUE INSTEAD OF THE F 29 AND A 50 NEUTRAL
WELL LEO TOLD ME HE NEVER TRUSTED THAT MOTOR ANYWAY
HOLLY JIMINIE LEO NOMIS LOST HIS MOTOR
GLENN R. KEARSHNER A.S.C.

"HELL'S ANGELS"

M-G-M'S NEWEST "BLIMP"



JOHN ARNOLD, A. S. C., head of the sound camera department of the Metro-Goldwyn-Mayer Studios, has brought out another type of camera "blimp" which is scoring a decided hit at those studios. This new device is pictured above with Arnold explaining the details to Leila Hyams. Miss Hyams is beside the new model, while Arnold is standing beside the earlier model that has been used for some time at the M-G-M lot. The new "blimp" is a solid aluminum casting, and is much more compact than the earlier model, yet offers much easier access to the camera within. Furthermore, the sound absorbing qualities are said to be considerably improved.

More Cameras for Technicolor Being Made by Mitchell

THE Mitchell Camera Company announces that their plant at present is working on an order for eighteen Technicolor cameras for the Technicolor Corporation. The first two of this order will be delivered this week.

Due to the widespread adoption of natural color for pictures the Technicolor Corporation has had to increase and expand its vast facilities in every way during the past year. A new Hollywood plant was added to the original one and many new cameras have been placed in use during the past year with the present order still in the making. The Mitchell Camera Corporation has manufactured all of the Technicolor cameras with the exception of the first experimental ones.

With the expansion of the Technicolor plant has come the development of one of the largest camera departments in Hollywood. This force of cameramen is headed by Edward T. Estabrook who has been one of the Technicolor outstanding cinematographers for many years. He has long been a master at the use of color cameras.

Three Companies Merge

AS this issue goes to press the news comes from New York that Educational, Metropolitan and Christie companies have merged into one organization which will be headed by E. W. Hammons. Charles Christie is slated to be vice president and business manager of the studios.

The new affiliation marks the return of the Christie brothers to the Educational banner after an absence of three years. Both the Educational and Metropolitan studios will contribute a considerable part of Educational's product for next season. These studios and the Mack Sennett plant are to produce the entire schedule of 64 two reel comedies for Educational's new line up. The Metropolitan also will continue to rent space to companies for feature production.

Color for Newsreel

Paramount eventually will use color in its newsreel according to Emanuel Cohen. The company now is experimenting with its own color process. Whether or not an all-color reel will be put on the market will be determined later.

SOME TALKIE OBSERVATIONS

William A. Seiter Gives Some Personal Remarks Anent the New Entertainment

By Hal Hall

WE have with us this month on the cover of the *American Cinematographer* one of Hollywood's finest directors, one of her most estimable gentlemen, and above all, a man whose success has never gone to his head which is packed with scintillating gray matter—he is William A Seiter, and he parks his directorial chair at First National Studios

Interviewing Bill Seiter is a difficult job, a job that requires patience, for he spends his lunch hour planning the afternoon s work and his plans are so well laid that there is scarcely a minute between scenes in which 'o engage him in the game of questions and answers. All of which is one very good reason why Hollywood producers like to have Seiter on their payroll. There is no waste motion with him He knows what his story is all about, knows what he wants to do with it, rarely shoots anything that he does not use and keeps everybody happy while he is doing it. Seiter is one of the rare directorial individuals who cuts his pictures as he is shooting them, so that when his final shot is made there is not so much for the cutting department to do, and very few faces left on the cutting room floor If Seiter doesn't want a face in the picture he doesn t have it photographed, so there are no broken hearts when his pictures reach the screen

Another outstanding quality of Seiter's is the fact that he is noted for his "No", rather than for his "Yes" No self-centered studio executive has ever had his Ego increased by Seiter, which in itself is somewhat of a distinction in this town where so many jobs are held because of the holder's ability to say, "Yes, Sir"

Seiter is one of the greatest boosters of the talkies He has been from the very start. At the time when practically everyone connected with the old silent pictures was bemoaning the future of pictures because of the influx of sound and stage players Seiter was declaring sound would be a God-send to pictures, buckled his belt a notch tighter and started in to show the world that directors of silent drama could be the best directors of the talkies

That he was successful is evident from the pictures he has made and from his position today. Since the advent of sound Seiter has made every type of picture from heavy drammer to slap stick musical comedy such as "Going Wild" which he is now directing with Joe Brown of the big mouth and twinkling feet as the outstanding feature. He has developed into one of the most versatile directors in the business, and attributes most of his success to the talkies and to using horse sense in making them

"The Talkies," says Seiter have been the salvation of the motion picture industry Lord knows what would have happened if the sound development had not happened when it did Everyone knows that the picture business was in a bad way when sound first hit us And then the picture business took on new life and started all over again to become the greatest entertainment business on earth We owe it all to the talking pictures.

At first there were many who feared that the talkies would put the silent directors and players right out of pictures. I never thought so All that was necessary was to use a little horse sense and go about the making of pictures in a natural manner The problem of mechanics was up to the technicians If they could record them and the cameramen could photograph them why couldn't the directors stage them and the actors play their parts? Of course the players of the silent days worried about their voices But a little voice training and the matter of voice was taken care of. We always had our players speak lines in the silent drama These lines were never heard. But what difference is there between them and the lines of today? The only difference is that the lines today are recorded and are heard with the picture Not much of a problem there The greatest problem was a mental one

"However, there was another type of silent screen individual who had his job cut out for him That was the director who never knew his story, and who habitually 'shot from the cuff' He had to get to work and learn his story, for there is an exactitude which must be observed in talkies. You cannot shoot a few thousand extra feet, hoping that they will save the picture in some rough spot You have to know your story and have it carefully plotted and planned or you are lost But that is not difficult

"Talkies have proven one thing That is that the screen has not needed the stage folk Look about you and you will see that the great faces of the silent days, with very few exceptions, are still with us, scoring tremendous hits with their voices Of course there are some new faces from the stage That was certain for some of the stage people had talent to offer that could never have been used in the silent days, but which is magnificent now.

Stage players who came in on the first wave of talkies found more difficulties to face than did the silent screen players. All this hinged around the technique of screen acting. And right there the screen players had the advantage They knew their screen technique God gave them voices so all they had to do was use them But the stage players had to acquire that screen technique Some of them couldn t On the stage the players play long shots all the time, directing their actions and voices to the back rows as well as the front Many of them couldn't overcome this when they tried the screen There is a technique in picture acting that is peculiar to pictures alone It is a simple matter for screen players to play their roles. So, there was no reason why the screen players should not succeed

Talkies have made the screen a decidedly improved medium of entertainment We can now present things that could never be put over on the silent screen The sound of dancing feet has a peculiar fascination Watching silent feet dancing on the old screen was no thrill But now it is different Then too, the matter of seeing a star sing in the old days was worse than boring Just some one sitting there opening and closing his or her mouth Gestures were ridiculous But now when a great singer opens his mouth in song we feel the thrill of his voice and his personality

"Comedy lines that throw an audience into stitches of laughter are possible now where they were not before Oh, yes this matter of talkies has made pictures, and with the improvements that are being made there is no limit

The talkies have brought about another change that is for the better It is that of demanding acting ability rather than mere beauty In the old days a beautiful girl could be photographed to appear like a million dollars She could become a raving favorite over night But today there is more demanded She must speak intelligently She must act well We are getting away from just beauty. That is good And thank the Lord we do not have elocution either Our players are speaking naturally and not in a Shakespearean manner

In the field of cinematography too there was a fear at the start that the talkies would be harmful They were at first when all was subjugated for sound But now our cinematographers are giving us just as beautiful photography as ever before. Take Sol Polito for example who is photographing this picture He is giving us the most beautiful photography you would ever care to see. And our photography like our acting will continue to improve as we become more accustomed to the matter of sound equipment Our cinematographers now have about forgotten that there is sound and are giving us the finest photography in the world, as our American cameramen have always done

"Yes, talkies are wonderful They have done much for pictures and will do more We will have stage people filtering in from time to time, especially in musical comedies and the like, but there is nothing to fear on the part of the silent screen players They have been in talkies long enough now anyway, to be classed as talkie screen players The silent days are past and gone"

PROGRESS IN THE INDUSTRY

Highlights of the Report of the Progress Committee of the Society of Motion Picture Engineers Given at the S. M. P. E. Spring Meeting

INCREASED interest was noted in the past six months in the subject of wide films Several different widths were proposed and of these 70 mm and 65 appear to have been most favored A sub-committee of the Standards Committee of this Society held several meetings to encourage the adoption of one width as standard The personnel of the sub committee consisted of the leading engineer of the producing organization interested in this problem A feature picture Happy Days and a newsreel on 70 mm film were shown as a regular program opening March 14 at the Roxy Theatre on a screen 41½ feet by 22 feet Several other theatres were also equipped to handle this type of film, and at least four feature pictures were known to be in progress

Definite advances in optical systems processing methods and the experience that follows production problems on a large scale all contributed to a substantial improvement in the quality of color pictures

Two huge sound stages have been completed in Hollywood recently by two producers One of these comprises a theatre auditorium capable of seating 1500 persons and a section which is also designed as a theatre stage in size 75 feet deep 80 feet wide 120 feet high This stage has been designed particularly for the production of lavish spectacles It is equipped with a steel curtain weighing 65 tons and each of its 12 floor sections is fitted with a hydraulic lift A vertical steel track 65 feet high permits camera shots in synchronism with the rising stage and curtain

The increased use made of incandescent lights has necessitated the installation of refrigeration plants in studios in connection with ventilation systems.

A novel feature of the sound studio at Wembly England is a tank fitted with a camera booth permitting under water photography The four new German studios at Newbabelsberg are built as the arms of a cross, all recording and monitoring being done at the center

A novel lens device for securing wider pictures without the use of wide film is of interest It consists of two lenses held in a mount which screws onto the front of the camera A lateral compression of the image is produced so that nearly three times as much image is included in the normal frame The picture is then expanded to three times normal width on projection

The added weight of sound-proof housings resulted in the design of stronger tripods One of these called a "camera dolly" was constructed of telescoping steel parts attached to a triangular rubber-tired traveling support

Portable dimmers were devised for use in the Hollywood studio They were used individually or in connected units of 2 or 3 for sunrise or sunset effects Each unit handled 20 kilowatts

A joint committee of the Producers and Technicians branches of the Academy of Motion Picture Arts and Sciences reported on an investigation of arc lighting in 15 Hollywood studios Three types of filters were found in use (a) individual choke coils for each lamp unit (b) choke coils for each group of lamps and (c) the use of large electrolytic capacity across the generator windings The investigation is being continued with plans for making oscillograph records of the commutator ripple at each studio

Abadie reported before the cinematographic section of the French Photographic Society on some interesting experiments with gaseous illuminants Mercury and neon cannot be used effectively in the same tube to give a white light, but when their combined light is supplemented with that from vaporized antimony and arsenic, a good white light is produced for the photography of colored objects A lamp has been produced which contains neon gas and a cadmium bismuth alloy at the cathode. After heating, the cadmium is vaporized and its arc given a light of desirable spectral distribution

Several French studios have commenced sound productions on a large scale a number of them by the variable area process Societe Gaumont which until quite recently recorded on the full width of a separate film by the Danish Peterson Poulson method have adopted fixed density recording in the margin of a separate film This record is printed subsequently on the border of the film bearing the positive image

Great interest has been shown in the sound school sponsored by the Academy of Motion Picture Arts and Sciences and with the completion of the fifth and sixth sections more than 900 studio workers will have taken the course The lectures presented by various authorities before this school have been assembled and published as a Technical Digest

The Debrie camera has been fitted with a sound-proof housing consisting of a box containing the motor drive encased under the camera and a cover on a vertical track which may be lowered or raised quickly by the movement of a hand lever All controls are accessible from outside the case when it is closed The merits of 16 different types of camera silencing housings used in Hollywood studios were tested by a joint committee representing the producers and technicians

Booms for holding the microphone over the actors have undergone material development and several ingenious devices are now available for handling microphones on the set

A modification of the Poulson magnetized wire recording method uses film base impregnated with colloidal particles of an alloy of nickel cobalt and iron as the magnetically susceptible recording material The film possesses a slight lavender tint when so treated

Another novel recording process is that suggested by Madelar which records a groove on the film support by means of a diamond stylus

Printing machinery was being redesigned rapidly for better quality and more rapid production of sound-on-film prints One manufacturer of printing equipment brought out a single operation printer and another manufacturer was reported to be working on a new model

One of the several problems connected with the reproduction of sound has been the proper control of sound level in the theatre Much use and some abuse of fader control has resulted from efforts to correct for volume variations resulting from recording sound at different levels and which were not entirely smoothed out by re-recording One studio has devised a "squeeze track" for the purpose of adjusting these differences in level This consists in blocking out part of the sound track by exposing it before development to a negative consisting of a black line of varying width contained between two black lines filling up the remaining space of the track on each side of the track itself which is in the center of the space

Equipment for cutting has been developed on a basis of the needs experienced for sound pictures and many of the makeshift devices are giving way to commercial products embodying the necessary features for handling sound films Three designs of one type of equipment were available for sound film editing: (a) a sound picture synchronizer for use with records on separate films (b) a disc reproducer, and (c) an apparatus for use when sound and picture are on the same film

As a result of a serious studio fire in the east and a laboratory fire on the west coast during 1929 a great deal of pressure was brought to bear on all laboratories to increase their safeguards for fire prevention Even before the two fires however a committee from all laboratories was appointed by Mr Will Hays to work with the National Board of Fire Underwriters to revise the code of recommended practice for laboratory requirements

Impending adoption of wide film introduces problems for the film exchanges since the larger reels will require larger shipping cans, and will cost more to ship because of their increased weight An average reel of 70 mm film weighs 34 pounds and rewind-

(Continued on page 36)

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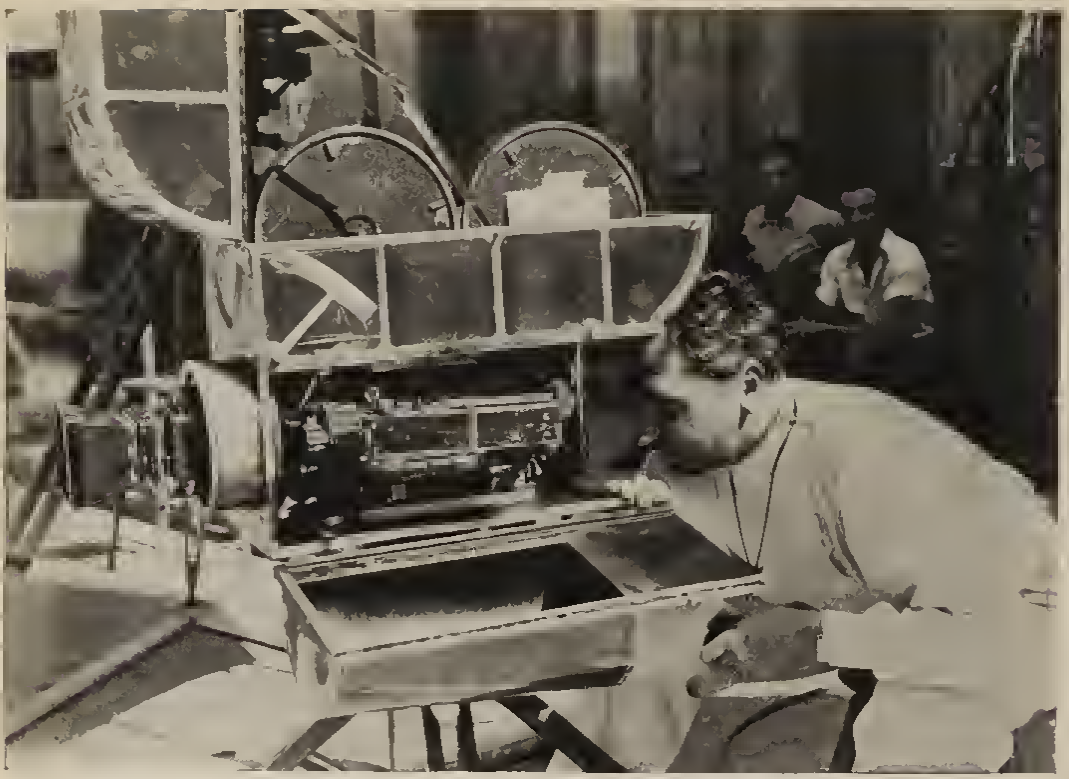

Hal Mohr and New Warner Bros Camera "Blimp"

Warner Camera Blimp

(Continued from page 10)

The second line of attack has proven more immediately fruitful It has consisted of efforts to reduce the size of the booth to such a radical degree that the camera alone remained coveted while completely mobile, and entirely accessible to the cameraman, who could once more return to the set as a visible person

This line of research has brought forth many interesting designs. but almost without exception they have suffered from a common failing they have not been adequately sound-proof All of them have proven themselves vastly more mobile than the booths but they have paid for it by some sacrifice of sound impedance Therefore, though a number of the studios have standardized on some form of lighter camera-cover or 'blimp,' an equal number more cautious perhaps, reluctantly stuck to to the unwieldy but sound-proof, booths

My own previous experience with experimental 'blimps' having been anything but satisfactory I naturally inclined toward the latter attitude It was therefore profoundly interesting to me when recently I was called to the Warner Bros Studio to direct the photography of several pictures, to find that my arrival coincided with their general adoption of a new and very remarkable "blimp" of their own design and construction My experience with them during the making of these pictures proved that these blimps are not only as perfectly sound proof as the best booths, but that they are, in almost every respect as mobile and convenient to operate as an un-covered camera

Constructionally this newest "Blimp" is quite as radical as are its results Instead of being as most previous types have been, a structural replica of the big booths it is comparatively small and light It consists of a light, but rigid aluminum framework, surfaced inside and out with sheets of a special cellulose material imported from Germany. Between the two layers of this sheathing is a comparatively large dead-air space which is responsible for the greater part of its sound-absorption This construction would make it possible to have an almost transparent "Blimp" if it were necessary but normally they are painted on the inside with a flat, black paint, to eliminate undesirable reflections

In form these new "Blimps" conform rather closely to the outlines of the cameras within them The entire top, and the larger parts of both the left hand side and rear walls are hinged so that they swing very wide open, leaving the cinematographer unusually ample access to his camera when that is necessary. The camera is placed in this "Blimp" exactly as though it were to be used normally with the exception that the matte-box etc. at the front is removed and mounted outside of the "Blimp" The usual Vitaphone synchronous motor is used The camera is mounted on a fully-insulated base within the "Blimp," and held in place by the customary screw, which is operated from outside of the Blimp The "Blimp" itself is secured to the tripod by means of a sub-base, which fits upon the regular head of a Mitchell tripod As the complete "Blimp" only weighs thirty-seven pounds it can be used satisfactorily on any ordinary tripod but for the sake of safety, the Warner engineers have evolved a special rolling tripod for it which is somewhat lighter in construction than the commercial models used with the heavier "Blimps" used elsewhere

In use this new "Blimp" gives the cinematographer almost as complete freedom as he would have with the camera alone When opened, he has complete access to every important part and adjustment of his camera, when closed he finds the camera adequately sound proofed but still with the more important units visible and the controls accessible The "Blimp" is so balanced that it may easily be panned and tilted in any way desired The focus may be adjusted by means of levers working on twin dials on either side of the case The finder, which remains in its normal position at the side of the camera, is always visible through a large hooded opening at the rear, conveniently close to the rear of the finder The opening through which the picture is photographed is of course fitted with a plate of optical glass But here is one of the most unique features of the "Blimp" this opening instead of being merely a fixed window in the front of the "Blimp" is a compatatively small sheet of glass fitted into a sliding collar, which, in turn

(Continued on page 44)

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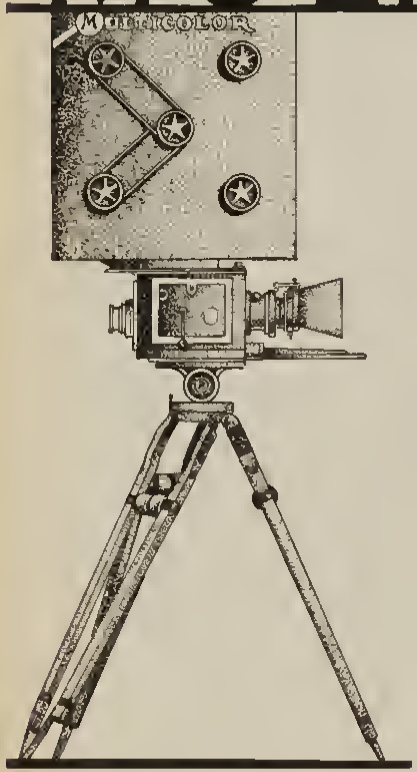

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S. M. P. E. Meeting

(Continued from page 13)

The following noon the women were entertained at lunch in the home of Mrs. C. Francis Jenkins.

The Wardman Park proved an ideal place for the meeting being far enough away from the center of the town so that few members played hookey from the long sessions. Furthermore, the Little Theatre located in the Hotel made a splendid place for the meetings. This theatre was wired by R. C. A. Photophone with its theatre equipment especially for the meeting and the projection of all pictures was capably handled and projected. The same organization supplied portable sound reproducing equipment for the banquet and should be congratulated upon the efficient and speedy manner in which the films at the banquet were shown. During the meeting the Board of Governors made a number of important resolutions. One of these was the establishment of an annual award in the form of a gold plaque or medal to be given in recognition of outstanding technical or scientific achievement in motion picture engineering to a member of the Society. This award will be presented for the first time at the fall meeting, it is expected.

A petition of Chicago members of the Society for permission to form a Chicago Section was also granted by the Board of Governors. Although no territorial limits have as yet been set for this Section, it is expected that it will include members residing in the territory between Denver and Cleveland, Ohio.

The Board of Governors also voted to make the offices of president of the Royal Photographic Society of Great Britain and Ireland and Die Deutsch Kinotechnische Desellschaft permanent honorary members of the Society.

This meeting demonstrated as never before the real importance and strength of the society in the motion picture industry. This was evident even in the way Washington newspapers treated the meeting in the columns of their papers. The Society now has more than 700 members with representation in practically every country where motion pictures are exhibited or produced.

Everyone who had anything to do with the arrangements and carrying out of the meeting should be congratulated on the

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smooth way in which the meeting was handled It proceeded from beginning to end without a single hitch and was testimony of the hard work and long hours put in by the various members who helped to make the meeting an outstanding success

A New Recorder for Sound-on-Film

An abstract of paper by E W Kellogg R C A Victor Co read at S M P E Spring Meeting

A NEW model of studio recorder has recently been adopted by RCA Photophone, Inc The most important difference between the new machine and its predecessors is in the means employed to give uniform motion to the film A sprocket no matter how perfectly made, nor how constant its rate of rotation does not impart uniform movement to the film, a slight slip or jerk occurring as each tooth engages or disengages The effect may be of the nature of a flutter or gurgle" but frequently has only the effect of making the high tones 'wheezy' or of adding ground noise

The new machine emplovs not a sprocket, but a smooth drum to move the film past the exposure light In this respect it is like its predecessors The drum is free running its speed being fixed by the film and varying with film shrinkage. The drum shaft carries a flywheel and attached to the flywheel is a copper flange in which eddy currents are induced by an electromagnet which is driven at a speed about 15% above that of the drum. This serves the double purpose of damping out ocillations in drum speed or 'huntint" and of supplying a forward torque sufficient to overcome friction The result is that the film has so little to do in helping or retarding the drum, that it runs with decided looks on either side of the drum, and no jerks are transmitted from the sprockets. Considerable latitude in magnet current is possible without impairment of results and the most sensitive tests fail to indicate appreciable variations in speed The fact that speed constancy is not dependent on precision construction nor exact adjustment insures for consistantly satisfactory performance

Steel, Glass Partitions for Theatres, Exchanges

OFFICE partitions of steel and glass in finish to suit the exhibitor or distributor for use in theatres and exchanges, as well as offices, are being manufactured by the Snead & Co., of New York. Non-inflammable materials are said to be used where steel, glass and composition board partitions are installed Vertical and horizontal members are designed it is claimed to carry and conceal all wiring Outlets may be placed on any horizontal or upright member of the partition without being noticed

Neumade Co. Marketing Safety Film Leader Box

A SAFETY film leader box claimed to be the only apparatus of its kind, is being marketed by Neumade Products of New York The device is said to insure protection against fire and has a tight looking malleable casting with a spring door The leader feeds from the magazine through the mouth tightly lined with asbestos felt Two cement bottles are fitted in the base and are handy for gluing purposes

Non-Combustible Cement

Non-combustible film cement, said to have passed several tests and also approved by the Department of Insurance of Michigan, is being distributed by the Hewes-Gotham Co of New York

The German 'Suddeutsche Telefon-Apparate-Kabel-und-Drahtwerke A G (Te Ka De), of Nurnberg, has published a communique in the trade press to the effect that besides Siemens-A E G and Lorenz it is also authorized to manufacture sound-film amplifiers and will soon start on this new venture

By WILLIAM STULL, A. S. C.

Preserving the Vacation

AT THIS time of year there is but one really important issue before the public where shall we spend our vacations? Beside this mighty problem such minor issues as Prohibition the Tariff and the fate of nations all fade into complete obscurity Homes and offices everywhere are the scene of hundreds of heated debates as to the merits or demerits of various resotts, and it is no longer safe to visit your friends lest you be drawn into this annual family battle

There is only one point upon which every prospective vacationer agrees that is that all vacations are too short Wonderful as they are the best of vacations must end some time—and the better they are the sooner they seem to end

Here is where the Amateur Movie Maker can score, for, by the intelligent use of his camera he can make his vacation joys last forever But to do this he must use his camera *intelligently* His vacation films cannot be of the common or garden variety of animated summer snapshots They must be carefully planned well executed and finally edited to secure the greatest amount of general interest

The first thing to remember in this connection is that any movie that is of lasting interest must tell some sort of a story It need not be a pretentious dramatic subject but it must be more than a disconnected series of animated snapshots Whatever it may be, it must show clearly that there was more of a purpose behind its conception than the mere momentary fun of 'making movies' Unless there is such a purpose, it can hardly escape being forgotten almost before the summer is over, like the ordinary run of summer snapshots But with such a purpose, it can be perennially interesting

This leads to the conclusion that successful amateur movies must be deliberately staged This is true of even the most apparently spontaneous films for cinematic action like extemporaneous speeches, is always best when carefully prepared in advance This preparation as has been frequently said before in these pages does not necessarily mean the preparation of an ironclad scenario for every bit of shooting but it does mean that the cameraman-director must have a good idea of what he is going to photograph before he starts This is particularly vital in most amateur work for in it except in the filming of co-operative, dramatic productions the man behind the camera is both cinematographer and director and in a word the leader of the enterprise And a leader should always be known to his subordinates as a man-who-has-thought

Started from this foundation vacation films can adapt themselves to any requirements, and any circumstances They may be simple little narratives of some family outing or they may be pretentious amateur photoplays requiring the concerted efforts of a large group But there is one rule which will apply to every case Make sure what story your films are going to tell and then go and get it above all don't be afraid to use all the film necessary to 'cover' your subject completely The shears will always eliminate superfluous scenes but there is only too often no cure for the scenes you forget to get

Vacation Scenics

Probably the most obvious form of vacation film is the personal travelogue Well made travel films are always interesting, and if they are made with the personal note they are doubly so We always want to tell our friends what we've seen and done on our vacations and a well-planned picture can tell more than a thousand words

But such travel films must like any other films have a definite motivating idea behind them, and that idea must be uppermost in the maker's mind during every minute of the filming This idea governs the treatment of the picture as a whole, and the making of every individual scene Speaking broadly, there are two main types of treatment for the amateur scenic film First that which concerns itself primarily with the place itself, and second that which concerns itself primarily with the maker's individual experiences at that place Either type of picture can be made individual and interesting though naturally the latter affords more opportunity for the little intimate touches which make for individuality

Another important thing to remember is that very often you needn't do it all yourself Most of our National Parks, and many of the great cities and other famous places here and abroad have already been very excellently filmed by others who have made their films commercially available In such a case it is usually a wise plan to be familiar with these commercial films for they can often be used and inter-cut with your personal shots in such a manner that better personal films can be had at a far smaller expenditure of time, trouble, and money In addition these commercial films frequently contain scenes of great interest but which the average amateur may not have the time or the opportunity to photograph himself

But travelogues record-films and playlets are by no means all that can be made on a vacation Most of us have some other special interest other than photography and this interest can very frequently be combined with our vacation cinematics to make highly unusual films For instance nature-lovers can make fascinating reels merely of the fauna and flora of the sections they visit (or their home sections too) There is a great and useful field for such films In a recent issue of *Filmo Topics*, Alfred M Bailey remarked 'We know African animals through the movies, better than we know the wild life of our own country.' This statement is undeniably true and it offers the amateur movie-maker a rich field of experimentation For our wild life though perhaps not so prolific or so well publicized as that of the Dark Continent is no whit less interesting, not any less difficult, and dangerous to photograph Shooting jackrabbits and prairie-dogs with a camera may not be dangerous, but it is no less difficult because of it And if we want a thrill our Grizzlies and Cougars are always willing to accommodate!

Aside from wild-life there are as many further subjects as there are interests The motorist, the golfer, the air-enthusiast and many others can find remarkable chances for unusual films of their hobbies wherever they go

Technical Hints

As vacation films are often made under conditions entirely different from those customarily encountered, a few strictly technical hints might not be out of place here

Exposure always seems to be the first troublesome problem. The best aid in this line is, first of all the use of common sense The conditions themselves may change, but they generally fall under the same classifications that the manufacturers have provided for in the exposure charts attached to the cameras. If still in doubt, a Bell & Howell *Photometer* or the Drem *Cinephot* will always give the correct answer Always remember, too that where an unusual amount of light is reflected from the backgrounnd—as in seaside and lakeside pictures, and those made where the sky fills a large part of the picture—the exposure should be cut down When in the mountains the altitude often has a similar effect. Therefore a good idea is to give normal exposures below the 4 000 ft level from there to around 5 000 ft, ¾ normal, and from there up to six or seven thousand feet half normal Further-

(Continued on Page 40)

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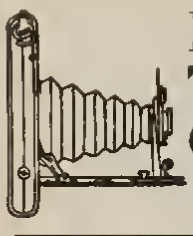

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Solving the Amateur's Problems

Question The long shots I make with my 6" telephoto lens are often hazy and indistinct What is the cause of this, and how can I remedy it?—J B H, Boston.

Answer. The cause is usually atmospheric haze This reflects an unusual amount of blue light into the lens, and as the film is much more sensitive to this light than our eyes are, the distance becomes overexposed and obscured The remedy is to use a color filter strong enough to hold back this excess of blue light and let the rest act on the film The proper filter for this depends on the amount of haze etc., at least a 2x filter should be used and preferably a 4x and proper compensation should be made for them in the exposure.

Question I have been using a 9 mm camera bought in Europe, but since returning to this country I have decided to change to a 16 mm standard Can I have my 9 mm. films reprinted on the standard 16 mm. film?—B. D., Philadelphia

Answer: This is quite possible, although your films would suffer some loss in delicate photographic gradation, as they do in duplicating Also, there would be a slight alteration of the proportions, as the 9 mm "frame" is of slightly different dimensions than the 16 mm There might also be some difficulty in finding a firm equipped to handle the smaller film but we are informed that Albert Teitel, of 105 W 40th St. New York City, specializes in reprinting all such off-standard film onto standard 16 or 35 mm stock.

Question What is the best way to insert titles in a dramatic film assembling the scenes in their correct order first and then cutting in the titles or putting the titles in during the assembling of the scenes?—A. C F., Bar Harbor, Me.

Answer The best method is to roughly assemble the scenes without the titles After polishing these up a bit—eliminating the N. G. scenes making sure that they are rightly arranged etc.,—you can project the film and begin to consider the titles

At this stage the reason for the delay will become apparent, for you will find that various changes which will inevitably occur during production will have made some of the titles originally planned unnecessary while on the other hand, unexpected incidents and impromptu scenes will offer opportunities for new ones Therefore this method of inserting the titles will give free rein to originality in both shooting and titling and result in a smoother, better and more finished picture

Question Is it possible to make scenes indoors by artificial light? If so, how strong a light will I need to photograph a subject sitting at a table?—S B S St. Louis

Answer It is quite possible The amount of light required depends on several factors including the type and design of the lamps the size and coloring of the set, and the aperture of the lens

For such a scene as you mention, 2 000 Watts should be sufficient with an F 3 5 lens provided that the lights are carefully arranged and that some reflectors are used It must be remembered that the illumination of a subject decreases as the square of the distance from the lights so don't try to illuminate too large an area Naturally the faster the lens used the fuller the exposure will be and either the less light will be needed for a given area or the larger the area that can be covered with a given amout of light You will also find that the type of light best suited for such use will vary with the kind of film used With ordinary film, arc lights are more efficient while with Panchromatic film, Incandescents are better, although arcs equipped with the so-called Panchromatic Carbons are almost equally satisfactory

Anti-Pirates

THE German talking apparatus construction industries are considering measures against piracy in the talking apparatus field A large number of illicit outfits in use in small German cinemas is becoming more and more a danger as the miserable reproduction in these theatres endangers the whole talking movement in Germany

Motion Picture Photomicrography

By Herbert C McKay, F R.P S

IN a recent issue of the *American Cinematographer*, an outfit for 16 millimeter photomicrography was shown This combination was decidedly interesting but the laboratory worker will notice certain features about it which offer obstacles. Principally the control is exerted through watching the field by means of a demonstration eyepiece The prism arrangement in such an eyepiece is such that the light is about equally divided This cuts down the light available for photography, and also presents to the eye an intensity of light which is painfully uncomfortable

The equipment illustrated in the accompanying photograph completely overcomes this difficulty, as the light beam is split by a prism which directs approximately 98% of the transmitted light to the film and the remaining 2% to the eye This permits the use of all the light which delicate specimens will tolerate while providing a perfectly comfortable light for the visual control

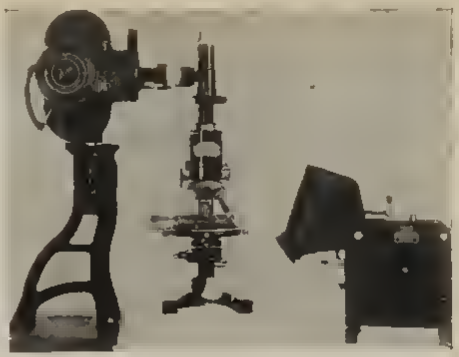
In detail this equipment with which the writer has made several hundred feet of perfectly satisfactory sixteen millimeter micro films are given herewith.

The light source used is an automatic arc lamp using photo white flame carbons The mechanism is actuated by clockwork thus maintaining a constant arc length with consequent constant actinic factor. The lamp carries an aspheric condenser of high efficiency as well as an iris diaphragm to cut off extraneous rays

The microscope is a laboratory research model with all controls conveniently located so that both coarse and fine focussing as well as the stage movement may be operated during the camera operation It is quite possible for the practised worker to keep the moving subject in the field and to maintain focus simultaneously. The design of the stage movement controls is such that it is decidedly superior to the usual type for photomicrography and considerably better than the manually controlled slide favored by many photomicrographic technicans It is of interest to know that this instrument is fitted with a flat field, high aperture aplanatic condenser, while all objective lenses are apochromatic giving the finest photographic results possible with the microscope the apochromatic lens corresponding practically to the anastigmat used in photography and technically to the apochromatic lens used by photoengravers

The extension at the top of the microscope tube is the special 98-2 beam splitter This is in a special mount permitting the most accurate matching of image planes of eye and camera This beam splitter mount carries an extra ocular in

Making pictures of microscopic subjects with 16 mm. camera



A complete equipment for making microscopic subjects with 16mm. camera

the focus of which is supported a field of green glass with a colorless rectangle in the center indicating the exact boundaries of the film frame In setting the apparatus up for use, a matte surface prism is placed in the camera, and a stage scale or micrometer upon the stage of the microscope Looking into the prism (which will fit most 16 mm camera gates) the microscope is carefully focussed until the scale is plainly seen, in sharp focus in the prism The tube position is noted by the vernier scale, and the eyepiece of the beam splitter is then focussed to correspond This gives a positive coincidence of foci in both camera and beam splitter

When this is done the stage micrometer and prism are removed The camera is then loaded and all is ready for the actual photography

Naturally the camera lens is entirely removed and the beam splitter connected to the camera by a light tight tube with a trap at the end allowing a certain slight motion for focussing without allowing extraneous light to reach the film

Using the arc lamp described a 20X objective and 10X ocular giving a total of 200 diameter magnification upon the film normal speed (16 per second) gave fully timed negatives upon panchromatic stock The subjects most often used in making home entertainment films were the tiny organisms which can be found in every pool of stagnant water The film magnifications used are from 70 to 300 diameters Test exposures have been made at magnifications as great as 1500 diameters with all satisfaction

This equipment is in every way thoroughly satisfactory for the scientist and laboratory It is also so simple that any amateur who can learn to use a sixteen millimeter camera properly may enter the field of cine-photomicrography with every assurance of success

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New Film Tariff May Be Set in South Africa

A NEW tariff rate is proposed in South Africa on film due to protests over former import charges New rate fixes two-pence per foot for silents and three-pence for sound product eliminating the idea of the difference between two shillings and two-pence per 100 feet and 30% ad valorem These charges apply to standard size film

Amateur photographers using baby cine-Kodoscopes would pay increased duty on positives not exceeding 10 millimeters wide, a ha penny a foot on film not exceeding 18 millimeters and a penny a foot on blank stock

Duty on blank stock in amateur width remains unchanged so that home pictures are not affected unless they are made outside South Africa and brought in under the new impost

---

New Lens for Color

COLOR FILM projection requires 25 per cent more light than a black and white film states an announcement published in the German trade press by the Zeiss-Ikon company In order to obviate this difficulty, the company is manufacturing special lenses for color-film projection These lenses have a much larger diameter than the ordinary ones and, if used with mirror reflector arc lamps, take in a greater number of light rays The picture thus obtained is as clear as a black-and white film without any additional light supply

PROFESSIONAL AMATEURS

Mary Astor Photographs "Holiday" With a Filmo

By William Stull, A S C.

FOR a woman to admit an interest in things mechanical and technical was a generation ago to admit herself a tomboy Today it is to affirm that she is a regular girl But strangely enough in the world of motion pictures the effects of the old tradition still remain, few indeed of the beautiful women of the screen have any deeper understanding of the fascinating and intricate machinery by which they have been made famous than is required in posing for publicity photographs of new apparatus This is particularly true in the field of cinematography Despite the fact that they literally live by cinematography most of the feminine stars think no more of it than the average housewife does They know of course that they look more beautiful from this angle and that Johnny or Tony or Ollie can somehow make them look more beautiful than anyone else can but beyond that they neither know nor care to know more And when they condescend to manipulate a camera—which need only be beautiful to look at—their work is of the order of the crudest snapshooting school

But there are exceptions to every rule In this instance there is Mary Astor Not only is she interested in what the men photographing her are doing, but she is understandingly interested in it For from the time of her very entrance into pictures, she has been fascinated by the mechanics of making movies And being a very normal enthusiastic young woman she has taken full advantage of the opportunities offered her and learned more about the craft that many a professional cinematographer knows She has delved into the mechanics of cinematography, of lighting of cutting of title writing and of projection until she has mastered them all And this interest is no mere pose with her but the sincere enthusiasm of a true amateur photographer

And being a photographer herself Miss Astor has become famous among the camera fellowship as one of the easiest stars to work with Her understanding of photographic problems and technique enables her to cooperate intelligently with the men behind the cameras—to be patient while they wrestle with the scores of knotty problems daily confronting them to be helpful and above all to be personally interested in them and their work to a degree rarely found in feminine stars Perhaps this personal interest explains the sympathetic photographic treatment she invariably receives for, as one man remarked it is only possible to photograph a star perfectly when you feel a personal interest in that star And if the star shows an understanding interest in you and your work your own interest is inevitably reciprocal

But Mary Astor does not interest herself in cameras and cameramen merely to be popular No ' she says ' I'm afraid it's for a far more selfish reason than that you see I happen to really enjoy photography'

I've always liked it ever since my first picture experience One of the first pictures I ever played in was a little two-reeler made down in Maine It was 'way off in the country, and the whole company lived together in one of those quaint

Mary Astor using her Filmo at Pathe Studio

New England farmhouses while we made the picture Part of the house was fitted up as a laboratory and the boys developed their negative there printed the dailies, and even cut the picture I was fifteen then—an inquisitive youngster who wanted to know how everything was done, and all about it I found out, too, for instead of being bothered everyone was eager to tell me whatever I wanted to know I learned from the cameramen just what their work was and why everything was done thus and so Then the laboratory men showed me how to develop the film and how to print it, and told me too the *why* of these processes After that the assistant director, who was also the head (and only) cutter, showed me how the scenes were assembled and spliced He was an awfully nice young fellow just a little older than I was, and we had the best times editing those little pictures' We made several pictures there in Maine and every evening after the day s shooting was over I'd slip into the laboratory and help with the developing or the printing, or the editing Before our stay was over I had learned so much that I was almost able to edit a picture myself

' With such a start how could I ever lose my interest in the technical part of the work? And even if I had wanted to, Mother would never have let me She never tired of reminding me that the actors weren t by any means the whole show Whenever I began to feel that I was getting pretty good she'd

ask me "Mary where would you be if it weren't for the cameramen the cutters the electricians and the laboratory men?" There was only one answer to that'

"But even without that sort of a reminder how could I keep from being fascinated by the wonderful work the men who photographed my pictures were doing? Every day I'd see them doing the impossible right before me—meeting physical danger and technical problems with the same calm spirit and carrying on regardless

So of course I kept up my interest in photography I had some still cameras and kept them busy most of the time but I always wanted a movie camera that I could use for personal movies.

'Finally the 16mm cameras came and I got my wish—or rather I got my *Filmo* I got it, too just the way I'm sure a lot of other girls have gotten theirs just before Christmas I enticed Mother and Dad into Bell & Howell's Hollywood branch and admired the new 70 D *Filmo* long and loudly, in a way no parent could mistake Oh I'm afraid I was quite shameless about it' Anyway when Christmas came my *Filmo* came too and I spent the rest of the day making my first roll of film Since then I've used every excuse I could to add to my outfit For instance on Mother's last birthday the nicest present I could find to give her was a new *F*-1 9 lens' But the giving hasn't been all one sided for just a little while ago she and Dad surprised me with a beautiful 'Treasure Chest" to keep my camera and things in Maybe though that was done in self-preservation for they always seemed to find themselves stumbling over cameras films or something like that

"Of course as I'm just an amateur movie-maker most of my films have been just like those of anyone else I've filmed my home, my family, and my pets in every way I could think of—and I'm sure some of my friends are beginning to look furtively for a camera before they'll trust themselves to speak to me' But it's been so much fun' I've at last been able too, to put into practice the things I learned about editing and titling pictures I've made my own titles, too, cards and all and photographed them myself

'And this hobby of movie-making has led me into some strange tricks For instance the other day I was sick in bed just at a time when I wanted to try out some new lights I'd given myself That was quite a disappointment—until I decided that doctor or no doctor I'd make my movies then and there' And I did, too I had my maid set up the camera and lights and then I directed myself in a funny little reel that I made without leaving my bed

Miss Astor and her Filmo

Naturally like all other amateur movie makers I've a desire to try my hand at making a little dramatic picture Right now I'm preparing a script for one, and I'm going to start shooting it soon Several of my professional friends are interested in it too and are going to play in it for me. Lee Tracy for instance, is going to be my leading man and another friend, the heroine And I for a change will stay behind the camera and be Director and Cinematographer

'Although this is my first independent dramatic production it is really my second dramatic one for I've made a special silent, 16mm version of *Holiday*, the picture I'm just finishing

(*Continued on Page 44*)

Miss Astor has the co-operation of a technical staff at R-K-O Studios

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Bell & Howell Introduces Special Lens Cleaning Kit

EXPERIMENTS conducted some months ago in Hollywood showed that with materials then available it was almost impossible to properly clean a photographic or projection lens. It was even found that most of the cleaning fluids then in use actually impaired the quality of the lenses Obviously such a situation meant imperfect photography and projection.

To solve this very improtant problem the Bell & Howell Company is presenting the B & H Special Lens Cleaning Kit This will meet a very actual need on the part of both amateur and professional still and motion picture camera users as well as projectionists

This new B & H Kit consists first of all, of a scientifically prepared fluid for cleaning lens surfaces Lengthy experiments were conducted both in the Bell & Howell Laboratories in this country and in the Taylor-Hobson Scientific Research Division in England in order to secure just the right fluid for this purpose

There is also in the kit a piece of specially tanned and hand-brushed chamois leather This unit is particularly important as it is not the regular commercial type of chamois obtainable at retail stores Commercial chamois, it is found, frequently contains elements which of themselves provoke a stain on the special type of glass used in photographic lenses when rubbed by this sort of leather—a stain which cannot be removed except by regrinding and repolishing the stained surface

Another item is a piece of specially selected washed lintless linen made from Irish flax Extreme care had to be exercised to secure a type of linen which would be thoroughly free from fillings and starches and at the same time leave no lint Also included in the kit is a genuine camel s hair brush which is used to remove dust from the lens surface before applying the fluid

All kinds of lenses—photographic, microscopic or otherwise will benefit by being cleaned by the materials which compose this kit

Complete but simple instructions accompany each kit and it is important that the instructions be followed carefully to secure the maximum results

Unique Test for Bell & Howell Photometer

A VERY interesting test of the new Bell & Howell Photometer is reported from Chicago It was not a blind-fold test it could not very well be that when it was a question of looking through the eyepiece of the Photometer and measuring photographic exposures but it was evidently a genuinely unprejudiced demonstration of what the Bell & Howell Company calls the 'uncanny accuracy' of this new exposure meter

Fifteen men who, it is stated had never seen the Photometer before, were shown the instrument and given brief instructions as to its use They were then asked to train the Photometer upon an object underneath an electric light—for the test was conducted at night

It is said that one after another in quick succession each of the fifteen used the Photometer and wrote his exposure reading on a slip of paper which was handed to a teller who alone knew the readings recorded by those taking the test

At the conclusion of the experiment the results were compiled 'To the surprise of everyone' we are told 'all readings were so close to each other—the variation from normal being less than one point—that if an actual camera movie shot' had been made a fine picture would have been obtained from each reading Every one who took the test would have had a good picture."

"The new B & H Photometer" states the Bell & Howell Company, 'leaves nothing to guess work No longer will the amateur movie maker need to follow a hit and miss method in making exposures optimistically hoping for the best'

The Photometer should not only be an incomparable boon for the amateur movie maker but should be of tremendous value to the professional cinematographers as well Still photographers should also find this instrument of great benefit

At present exposure readings can be made by the B & H Photometer for either the Filmo 70 or 75 cameras or both Later the instrument will be made available for use with all types of movie or still cameras

The Pathe-Natan circuit now comprises 70 cinemas in France.

Notable Achievement in Surgical Talkies

NOTABLE achievement in the use of 16 mm talking motion pictures in the surgical and medical fields has recently been accomplished by Dr. W. F Windle and Dr H B Kellogg of the Northwestern University Medical School, located Chicago

The two surgeons, who are connected with the Medical School s Department of Anatomy took 16 mm pictures of a dissection This particular dissection was extremely thorough and required about six weeks to complete The pictures showed the essentials of the whole matter in two reels of films

After the pictures had been completed a synchronized sound record was made on phonograph discs in which the chief surgeon orally explained the procedure shown in the movies The pictures were then shown in conjunction with the sound record by means of the Project-O-Phone, a portable device for presenting sound movies, one of whose units is a Bell & Howell Filmo projector

In this dissection talkie, the surgeon s voice is heard in a running lecture and commentary all the time the pictures are being shown Special points of the dissection are pointed out and attention is called to them. Frequently a diagram or part of the skeleton is shown in the picture and reference is made to them by the voice of the surgeon, practice which greatly facilitates understanding of the dissection The whole picture can of course be presented as often as desired and thousands can reap the benefits of this dissection instead of a single class or group

Drs Windle and Kellogg recently took a Project-O-Phone, their picture film and sound discs to the University of Virginia at Charlottesville and gave a demonstration before a meeting of the Association of American Anatomists This was easily possible as the entire Project-O-Phone weighs only about 90 lbs It comes in two units and does not require an expert operator or a fire booth

Both Dr Windle and Dr Kellogg thoroughly believe that they have demonstrated a most valuable method of medical and surgical instruction

Motion Pictures to Help Golfers Improve Their Game

WILL 1930 help my game? That is a question which many a golfer is asking himself today, and he is hoping that somehow or some way a miracle will happen which in some mysterious fashion will cut his score this year

For some time the use of 16 mm motion pictures to help the golfer improve his game has been advocated and quite a number of golfers have been benefited, but 1930 will undoubtedly see such pictures come into substantial use for golf instruction

In an article in Golfdom George Sargent, well-known golf pro of Columbus Ohio comments on the practicality of Filmo motion picture cameras and projectors in his work and also goes on record on teaching golf via movies

It is my firm belief,' he says 'that photographic aid in golf instruction has opened a new era of speedy and sound development of the pupil's game Any golfer can have pictures taken of himself—or herself—in action and have a professional analyze them This service as a diagnostician will rank as an important factor in the development of the player's game An instruction film is the most direct and forcible method of developing a lasting and proper muscle memory in the pupil's mind"

In the June issue of Golfdom appears an article by C A Ziebarth, secretary of the Bell & Howell Company, on how movies can help the average golf club increase its receipts—for example, how the showing of amateur motion pictures of club tournaments, etc., will stimulate dinner business and will also build up club morale Mr Ziebarth writes from the standpoint of a business man who is interested in seeing his golf club register a financial success

Berlin exhibitors recently voted unanimously in favor of a 20% increase in prices when talking or synchronized pictures are shown

There are 12,000 theatres in Japan About 20% of the films shown are American, but there are also six large producing companies which supply this formidable market

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Progress in the Industry

(Continued from page 20)

ing is a man sized job requiring care to prevent cinching or tearing of the film

A new model projector as well as a new assembly for older models was announced in 1929 which incorporates as a special feature a rear shutter between the lamp house and the gate Other features of the new model as claimed are easy and rapid change-over from disc to sound-on film and means for maintaining accurate focus and centering of the picture

The problem of equipping many thousands of theatres for sound reproduction during the comparatively short period of a year and a half has been a serious and gigantic task both from the engineering as well as the economic standpoint

Sound picture projection apparatus is now in active use on trans-Atlantic liners, in a Chicago hotel dining room, and even in railway cars A successful showing on a Union Pacific transcontinental train was arranged during the fall of 1929. A Delaware corporation has been formed to promote a fleet of specially designed railway coaches as the first unit of a projected nation-wide system of mobile sound theatres to present pictures in small villages The first theatre for the exclusive showing of sound newsreels opened early in November 1929 running a continuous show from 10 00 A M to midnight

An audible frequency selector has been designed for use of the projectionist to accentuate attenuate or eliminate certain frequencies delivered to the amplifier

Details have been published on the technical characteristics of all the sound reproducing equipment on the French market The only French process which is complete from the taking to the production end is that of Gaumont

A unique generator is being marketed by an Austrian firm located in Vienna It is known as the Rosenberg cross-field generator An arc such as that in a projector may be connected directly to the generator and the voltage and current are self regulating Two of the four commutator brushes are short circuited When the outer circuit is closed a magnetic field and an armature field results in the same direction but opposed, the former increasing slowly, the latter rapidly

A new sound-on-film portable projector equipment by RCA was announced in October 1929. The projector and sound reproducer is housed in a metal cabinet 24 inches square and 12 inches wide mounted on four telescopic legs Film magazines are located on the art side of the case

Further details have been made available on the portable sound equipment supplied by Western Electric The delivery and take-up reels are included on the same shaft inside the projector case A 60-foot throw is possible giving a picture 7 feet by 8 feet in size

A continuous projector designed by a Frenchman, M R Huc has several novel aspects to recommend its consideration Film is passed on a curved track in the form of a part cylinder before a light aperture somewhat higher than that of a single frame An image is projected onto a mirror in the center of the cylinder and set at an angle of 45 degrees to the light path The mirror turns at a speed one-half that of the moving film through a slight arc and then returns to the original position while a shutter cuts off the light momentarily A stationary image is projected on a screen placed at right angles to the original light source

Considerable attention has been given the theatre acoustics problem during the past year One firm has made an acoustical analysis of over 1500 theatres and made recommendations for treatment of the auditorium A lowering of the accepted optimum reverberation time as a function of volume was reported Theatres with square auditoriums were found in general to have better acoustic properties than long narrow theatres

Sound motion pictures began to be used for non theatrical purposes during 1929 The Hotchkiss School in Lakeville Conn was reported to be the first school to have sound reproduction facilities installed

An application of the use of a sound recorded address was made in January 1930 when a corporation president spoke in eleven different cities on the same evening at the annual President s dinner through the medium of the sound picture

Confessions of the defendants in burglary and murder trials were recorded in Philadelphia as a part of an experimental investigation on the value of the sound motion picture in criminal court practice It is reported that a bureau is to be established for making sound pictures of prisoners so as to have records of their voices gestures and mannerisms

Included in a group of motion pictures shown at the 1929 fall convention of the American College of Surgeons were four sound pictures, three of which were recorded addresses accompanying diagrammatic pictures while the fourth represented an obstetrical operation accompanied by dialogue The operation was performed by Dr DeLee well known Chicago obstetrician and the dialogue was synchronized with the film by a crew of Fox cameramen Dr DeLee has an elaborate laboratory for motion picture photography in the Lying-In Hospital in Chicago It is also equipped with an animation department

Motion pictures of living cells of body tissues were made by Rosenberger working with Carrel at the Rockefeller Institute and shown at the Thirteenth International Physiologists Congress in 1929 Studies requiring days of observation were shown to an audience in half an hour Fifteen medical films have been prepared in a program under the auspices of the American College of Surgeons the Motion Picture Producers and Distributors of America and the Eastman Kodak Company Subjects made recently deal with acute appendicitis, obstetrics vestibular function and development of the rabbit's ovum

Starch of Vienna has made ultra rapid motion analysis studies of micro-organisms using an Askania High frequency camera To reduce vibration effect the camera is attached horizontally to the wall but the microscope may be used either in a horizontal or vertical position Exposures mostly over 100 per second were used focussing was done with a green filter interposed and the arc current reduced to a 5 amperes so as to minimize heating effects on the delicate organisms

The industry is alive to the possibilities of television and further progress has been made which though rather slow is encouraging Three producers are including reservation of television rights in their contracts According to estimates by Jenkin about 20 000 amateurs are receiving radio movies which are broadcast from station W3XK Washington Other new television stations are WERN Chicago operated by the Great Lakes Broadcasting Company, and W2XCR Jersey City, and W2XCD, Passaic The last two named stations synchronized radio with the pictures and though the images were said to be hazy, the lip movements were stated to be discernible with the sound

A new cathode ray tube of receiver giving a picture 4 inches by 5 inches has been described by Zworykin The method eliminates the high frequency motor previously necessary for synchronization together with its power amplifier No moving parts are used A fluorescent screen aids the eye's persistance of vision and makes possible a reduction of the number of images per second without noticeable flicker The transmitter is a modified motion picture projector with means for horizontal scanning

The selection of standards for radio television has been discussed including picture proportions number of scanning elements, number of pictures per second scanning method and direction and phase or current

A camera capable of taking 40 000 pictures per second by means of a drum having 180 mirrors revolving 225 times per second was exhibited at a Scientific Congress in Tokio The camera was designed by the Institute for Physical Research of the University of Tokio Lawrence and Dunning of the University of California have been studying the characteristics of the high voltage spark by means of a camera which has a shutter speed equivalent to the taking of 250 000 pictures per second

Cinematographic methods were used to time the high speed Schneider Cup airplane races held at Calshot England in the fall of 1929 A motion picture camera made pictures of the plane as it crossed the start and finish line and also recorded simultaneously the face of a calibrated Veeder counter which was actuated by a timing fork vibrating 10 times per second

As noted earlier in this report the use of motion pictures in color continues to expand and a number of new processes have appeared although technical descriptions of them have been rather meager An estimate has been made that 15 per cent of all pictures made in 1930 will be in color

Newsreels made by a new color process were released by Pathe in March 1930 The process is claimed to be equally as rapid in production as black and white prints and to avoid the use of filters and prisms Pictures of the New Orleans Mardi Gras floats were made and shown in New York the following week

In the Raycol two-color additive process demonstrated in England light entering the camera is divided into two parts

(Continued on page 39)

RUSHES

Which Are Painful to a Talkative Young Man of the Movies

By A. Kinney Griffith

BARRY BARDELLY featured player in "Hearts Aflame" was a happy man. He had a standing date with Betty Lewis was was an extra in the cast.

Barry and Betty had attained that point of intimacy where they enjoyed long automobile rides dances necking gin parties and earnest conversations. They shared confidences and tonight as they sat in her Hollywood apartment, Barry informed the young lady of his choice that a great day was in store for them.

"When?" she asked.

"Tomorrow."

"Tell me about it Barry."

"Well. Lew Jenson is through with Epic Features' Jacob Conlee fired him!"

"Gee, don't keep me in suspense dear tell me everything!"

* * *

"WELL you know how Lew Jenson has been talking about wanting a thousand a week more or he'd go over to Art-Craft? Sure. Well we finished 'Hearts Aflame' and today everybody congregated in the projection room for the studio preview. President Conlee and Lew Jenson were there in the front row. Bill Yates Gloria Udell and Mary Hawes the three leads, were there.

"Everybody who had anything to do with the picture was there, including some writers from the press and fan magazines. The picture came on and from the very first minute the audience started laughing. The photography was excellent the sound recording perfect and the actors in fine fettle. The picture was a panic.

When the final fade-out came, however, the picture did not die away. Instead two new figures appeared on the screen. One was Lew Jenson the other one was I—and this is what happened.

I stuck out my hand to Lew. 'You did great work in this picture,' I said from the screen.

"'Hub!' Lew grunted and his chest stuck out 'til the buttons nearly popped off. 'Yeah, if it wasn't for me this picture would have been an awful flop. I'm good. And if I don't get that thousand dollar raise I'm going over to Art-Craft and let Jake Conlee and his whole lousy outfit go to blazes!'

"'What's that?' I yelled from the screen—and baby you should've seen the frown I pulled!

'Suddenly there was a commotion in the audience. Lew leaped to his feet and sent a wild yell toward the projection room. 'Cut!' he howled. 'This picture is finished. Let's have the lights!'

The man at the projection machine didn't hear, or if he did, he paid no heed. On the screen I was saying rebukingly: 'It looks to me that Mr. Conlee is a genius Lew, and you should be glad to be on his pay roll.'

Lew's face registered fury as he answered. 'Oh you give me a pain in my chiropractic column, Barry. It's my brains and acting that has put Epic Features over ever since the movies learned to talk—nor Jake Conlee!'

'The audience began to snicker. Lew Jenson was squirming like a man sitting on a hot stove. 'Cut!' he yelled again his voice choking with mortification. 'Mr. Conlee, please there's some awful mistake here!'

'"Keep quiet,' Conlee said. 'I want to hear all of this.'

Lew was beginning to edge toward the door when my answer came from the screen. 'Lew you're either drunk or crazy to talk about Mr. Conlee like this. Why he's the finest . . .'

'Hooey—hokum!' Lew hollered from the screen. 'He's a big fat-headed dumb-bell. If Jake Conlee and a cabbage-head had a thinking contest, Conlee would come out second!'

"A few more lines and the scene ended. The light came on. Down in front Mr. Conlee was staring malevolently at the quivering, cowering figure of Lew Jenson—the man to whom he so nearly had given a new three-year contract.

Lew took one look at Conlee's face. He realized the hopelessness of arguing or explaining. The evidence against him was incontrovertible. Conlee had seen and heard. But he was dignified. He merely reached into his pocket and drew forth the unsigned contract, tore it into tiny pieces, and threw the pieces at the feet of Lew Jenson. Then Conlee got up and walked out."

* * *

WELL, my lands!' Betty exclaimed and threw her arms around Barry Bardelly, kissing him joyfully. 'How did it all happen?'

Easy, baby, easy.' Barry replied giving her a big hug. 'I knew that Lew wasn't on the square so I trapped him the other day. Jimmy Doyle the head cameraman was in on the deal. When we finished a scene and the director had said 'cut' Jimmy just let the motors and the recording machines run. That also kept the cameras turning over, but Lew didn't know it. The mikes were open too so everything we said and did was photographed and recorded. Yesterday when we finished shooting and they started to cut and assemble the rushes Jimmy Doyle and I just tacked that little scene on to the end.

"This evening Mr. Conlee called me into the office and told me that I was to take Lew's place in the new picture 'LOVE AND LIVE.' Tomorrow, I sign the contract for a starring role."

An air of bliss prevaded the cozy apartment. Betty joyfully embraced Barry the feeling was mutual.

Gosh!' she exclaimed, gasping for breath. 'you hear of fellows getting the breaks—but you not only get them—you make them!'

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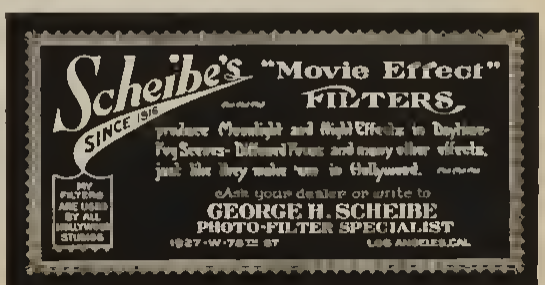
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Progress in the Industry

(Continued from page 36)

by means of a beam splitter and is then caused by a system of rhomboids to form two images one-quarter normal size in opposite quarters of the frame on standard size film, one through an orange filter and the other through a blue-green filter A twin lens projector with the appropriate filters over the lens superimposes the two positive images on the screen

The Kodel camera exposes four pictures on each frame of 16 mm film by a mechanism which introduces an alternate horizontal and vertical movement on a rear projector screen, the images being reflected from a shielded mirror onto the screen McKay described methods of producing distortion effects by exposing motion pictures through opthalmic prisms and an auxiliary lens

A non-intermittent amateur projector employs a 12 sided prism in a cylindrical mount which revolves between the aperture and the objective

A passenger airplane flying from Columbus Ohio to Los Angeles, was equipped to show motion pictures on 16 mm film enroute. The projector was operated with dry cells and a daylight screen was used

An unbreakable film was described which consisted of strips of 16 mm film, 4¾ inches long scaled between thin pieces of steel which had holes cut through for the pictures and the film perforations These strips were projected by stacking them in a projector magazine where an electro-magnet picks up the top strip which is then moved intermittently past a horizontal aperture A mirror deflects the image along a horizontal axis onto a translucent screen

A recent survey made by the secretaries of the 32 Film Boards of Trade of the Motion Picture Producers and Distributors of America revealed that there were 22 624 motion picture theatres operating in the United States About half the total number were wired for sound pictures There were reported to be 57,743 theatres in the world as shown by a census taken by the Motion Picture Division of the U S Department of Commerce With the increased total for the United States shown in the Board of Trade report, the world total would be 59,867.

It was estimated that a half billion dollars were invested in sound motion picture development during 1928 and 1929 Exports of film increased in 1929 over 1928 282,000,000 feet being shipped out in 1929 as compared with 222,000 000 feet in 1928

Pictures made in studios of American companies represent 85 per cent of all film entertainment, although United States producers make less than half of the world's feature product The yearly pay-roll of Hollywood producers reaches $100 - 000 000, averaging $2 000 000 weekly

Valuable summaries of development in the motion picture industry were published during 1929 in the Encyclopedia Britannica The subjects treated and the authors were as follows History—T Ramsaye, Production—J L Lasky, Sets—C Gibbons, Acting—M Sills Direction—C B de Mille Make-up—L Chaney, Technology—C E K Mees

A section of the 1930 Supplement of the New International Encyclopedia deals with motion pictures and was prepared by R Watts In the article on Photography in this same publication G E Matthews reviews the growth of motion pictures from 1914 to 1929

New publications were the Journal of the Society of Motion Picture Engineers, Journal of the Acoustical Society of America, Projection Engineering Electronics, and Cinematography

A partial list of the new books is as follows

1 *Technical Digest, Academy Motion Picture Arts and Sciences, Hollywood, Calif., 1930* A compilation of published lectures given as part of a School on Sound Fundamentals.

2 *Year Book of Motion Pictures* Film Daily, N Y 1930, 12th Edition.

3 *Kinematograph Year Book*, Kinematograph Publications Ltd., London, 1930

4. *Encyclopedia on Sound Motion Pictures*, Cameron Publishing Co Manhattan Beach, Brooklyn N. Y., 1930

5 *Photographic Emulsions*, by E J Wall, American Photographic Publishing Co., Boston, Mass., 1929.

6 *See and Hear*, by W. Hays Mot Pict Producers and Distributors of America Inc., New York, 1930 63 pages.

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7 *On Film Technique*, by V. I Pudovkin Trans from Russian by I Montagu Gollancz, Ltd., Loudon, 1930 204 pages

8 *Sound Projection*, by R Miehling Mancall Publishing Co., New York, 1929, 528 pages

9 *Photo-electric Cells* by N R Campbell and Dorothy Ritchie, I Pitman & Sons, N Y., 1929

10 *Sound Pictures and Trouble Shooters Manual*, J R Cameron and J F Rider, Cameron Publishing Co., Brooklyn N Y., 1930

11 *Electric Transmission of Pictures and the Telehor (Das Elektrische Fnsehen und das Telehor)* D von Mihaly M Krayn Berlin, 1926, 196 pages.

12 *Television*, H H Sheldon and E N Griesewood, D Van Nostraud Co., N. Y., 1929 194 pages

13. *Radio Movies, Radiovision, Television*, C F Jenkins, National Capital Press Inc., Washington, D C., 1929, 143 pages

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Amateur Movie Making

(Continued from page 28)

more large banks of snow have the same effect as large bodies of water, and reflect additional light into the lens After snow or rain storms when the air is unusually free from dust the exposure should further be reduced Where distant scenes are attempted panchromatic film and filters are imperative In fact panchromatic film is advisable for all scenic cinematography, as it improves the color-rendition tremendously, making a far better picture

When traveling always do your best to protect the camera and lenses from dust and before shooting, be sure that the camera—especially the film-channel—is free from dust and grit and that the lens and filters are clean For this purpose it is always wise to carry a small camel's-hair brush, and a supply of lens-tissue.

As vacation films rarely permit retakes it is well to safeguard yourself by the use of an accurate exposure-meter and a firm, substantial tripod

Furthermore before starting determine whether or not you will want duplicates of your films If you do use Panchromatic negative film rather than reversal, for thus you can always be sure of prints of the first quality, and in any number If you use reversal film be sure to have your duplicate made before you start showing the film to your friends for any scratches or other injuries done the original film will appear on the dupes', as well.

Lastly remember that the most important accessory of an amateur or professional movie-maker is common-sense and always try to use it as efficiently as you would use any other photographic accessory

Advantages of Non-Intermittent Projection by the Revolving Lens Wheen Mecbanism

Abstract of paper by Arthur J Ho'man read at S M P E Spring Meeting

EXTENSIVE comparison tests conducted by men thoroughly familiar with the performance of intermittent projectors, have proven conclusively that the revolving wheel projector easily produces screen images which are fully the equal of the best present day presentations as regards definition, steadiness and brilliancy In other words this system of projection, as embodied in a mechanism designed and constructed some four or five years ago meets the most exact requirements of critical definition, steadiness and screen brilliancy

The advantages of the revolving lens wheel system of projection reside in the elimination of the intermittent movement and the shutter The uninterrupted flow of uniform and relatively low intensity light to the screen produces a clear bright and extremely pleasing quality of picture entirely free from scintillating effect in the highlights Due to the continual dissolving action, which occurs between successive film frames the appearance of graininess is greatly reduced and the action is smoothed out These factors materially reduce eye-strain and fatigue thus enabling the observer to enjoy to the fullest extent the improved tone qualities The screen results produced with this system have been likened to paintings of old masters

Elimination of the intermittent movement and the introduction of a scientifically designed take-up control reduce film wear and damage to a minimum making it possible to get several thousand exhibitions from a single print without accumulating scratches oil and dirt over the picture area Moreover, since the spot intensity is only half normal the film strip is subject to very little heating effect The aperture and gate design effectively prevent buckling

The optical system easily and instantly adjustable for variation in shrinkage of film is very simple It contains no mirrors or prisms and does not require cams or other variable velocity devices for its operation The system may be designed for any desired film frame size and is equally effective for 16 mm or double width film The model used at the S M P E Spring Meeting is equipped with improved safety devices including a fool-proof fire shutter and effective magazine valves

The cinematography of the expedition which is attempting to scale Mt Kangghenguda the second highest mountain in the world is in the hands of the well-known French cinematographer M Duvanel

The Cinematography of Brownian Movement With the Filmo Camera

An abstract of paper by R. Fawn Mitchell read at S. M. P. E. Spring Meeting

BROWNIAN Movement' is a characteristic of extremely small particles suspended in a solution. Therefore, to take motion pictures of the movement of these particles a high magnification must be used. The highet the magnification used the more the light that has to be concenttated on the object to permit taking motion pictures. Naturally, the higher the magnification, the less the depth of focus and the consequent difficulty of focusing. At the same time a sufficiently high magnification has to be used to register the small particles on the film.

A series of tests was conducted using both 16 mm FILMO and 35 mm EYEMO cameras in conjunction with different illuminations. Different magnifications were tried so as to provide a comprehensive comparison of the results obtained under different conditions.

Incandescent lights were found of insufficient powet to permit motion pictures being taken at the magnifications used so that arc lamps bad to be employed. The tendency of the arc crater to move during operation necessitated watching the subject while photographing. A Microphote, the essential of which is a split-beam prism passing 5% of the light and reflecting 95% of the light was found very satisfactory. A Reflex Device permitting a prism to slide in front of the camera apetture, was used to focus the very small particles which could not be seen through the Microphote. The eye-pieces of the Mictophote and Reflex were adjusted so that after fine focusing was obtained in the Reflex the focus could be checked in the Mictophote while actually filming.

For extremely high magnifications a combination of Therapeutic carbons and 16 mm orthochromatic film was found best. For smaller magnifications a combination of 16 mm panchromatic film with thin core Sunshine carbons was found more satisfactory. A chart is given showing the spectral sensitivity of the panchromatic and orthochromatic films as compared to the spectral energy distribution of the two types of carbons.

The actual arrangement of the apparatus is shown and the sequence of adjustments are detailed very carefully, to assist others in duplicating the results with certainty. Cuts are shown made of short strips taken from various scenes and demonstrate the effectiveness of the method for taking motion pictures of such small objects. Blood cells of 1 or 3 microns diameter were enlarged so as to more than fill up a 16 mm motion picture frame. Showing these pictures on a screen 8' x 10' gives a magnification of about 250,000.

Book Reviews

Tilney and Cameron Give Us Some Good Material

PERHAPS we are a bit delayed in commenting upon 'The Principles of Photographic Pictorialism' by F. C. Tilney, F.R.P.S. However, one cannot give an honest opinion of a book unless he has read it and to digest this remarkable book by Mr. Tilney is not a feat that one can perform over night.

Frankly, this book published by the American Photographic Publishing Company of Boston, is one of the most worthwhile volumes that has come to the hand of the writer in yeats. Mr. Tilney has done a really great piece of intelligent work in preparing this book, and we unhesitatingly recommend it to all who ate interested in photography and pictorial beauty. It is a book written in scholarly fashion and contains a wealth of excellent material which is invaluable to any pictorialist.

JAMES CAMERON has given the picture industry another excellent book in his 'Sound Pictures and Trouble Shooter's Manual.' This volume of 1200 pages and 500 illustrations is well worth anyone's study who is interested in sound, whether in the theatre or the studio. Mr. Cameron, as usual, has gone about his task in painstaking fashion and has turned out a book that should be in the library of everyone connected with the technical side of pictures. He has also brought out an "Encyclopedia on Sound Motion Pictures" which is equally valuable.—*Hal Hall*

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Dear Mr Factor
Question— I am having great difficulty in making my rouge look like a natural color Is there any set rule for applying it?

M G Denver Colo

Answer Rouge in any woman s hand can be compared to the brush in the artist's fingers Incorrectly applied, it will mar the most perfect features Rouge should be applied by putting a very small amount on the cheek bone or on the highest point on the cheek, then blend with the fingers to the fullest part of the face—stopping at the hollows Blend the rouge at the edges so that no line of demarcation shows This will give you a natural appearance

Dear Mr Factor
Question Should I use the same shade of powder in the evening that I do in the daytime?

E I . Wichita Kansas

Answer Evening make-up should be a little lighter and brighter than daytime make-up Use a shade brighter rouge at night—it will give you the same natural and healthful coloring that you have in the daytime Be sure to follow out the color harmony scale according to your type

Dear Mr. Factor
Question My hair is very dull and looks lifeless What can I do to overcome this?

MABEL M New York N Y.

Answer Use a little brilliantine each morning This will brighten your hair and give it more life

Dear Mr Factor
Question I have a very pale complexion—almost what would be called ghastly, and rouge does not look natural on me What shade should I use?

Answer From the meager description you have given I believe Blondeen is the shade for you providing you are blonde If you have dark hair, use Naturelle Rouge Care must be taken to use shades that are not too vivid, when you have very little natural color The softer shades both in powder and rouge will harmonize better with your type and will not produce such a marked contrast

Dear Mr Factor
Question My neck and arms are very tanned What can I do to make them appear well when wearing an evening gown?

DORIS S , Louisville, Ky.

Answer Use Liquid Whitener This comes in various shades to harmonize with your general make-up Use a shade lighter than your Face Powder

Dear Mr Factor
Do you consider Eyeshadow necessary to a complete make-up? I have never used it—can it be obtained in various shades and what is the object of its use?

K C , Dayton, Ohio

Answer Eyeshadow plays an important part in a make-up It can be obtained in shades to match the eyes Its purpose is to make the eyes appear larger and give them an added brilliancy

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Saving Films

THE National Library of Austria has created a "Cinematheque," in which will be conserved copies of the most important films judged from an artistic and documentary point of view Already 15,000 photographs and 500 films placards have been catalogued and stored The principal object in view is to prevent the loss of such films after a short period of projection in the cinemas

New India Firms

THE increasing popularity of "home-grown" films in India is indicated by the registration of more and more companies The following have recently been formed

Bright Star Films Limited. Director P C Das Gupta To produce Capital, 2 laks of rupees (about £30,000).

Films of the East, Limited, Calcutta Director, Captain S C. Shaw To produce Capital 10 lakhs (£150,000).

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Pathe India Theatres, Limited Bombay Directors, Alexander Hague. To own theatres. Capital, 1 lakhs

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Kindly Mention The American Cinematographer When Writing to Advertisers

Tendencies in the Cinema

(Continued from page 14)

non sequential logic. It has accepted the compound as fiscal salvation and as palpable technology But the compound is an art- technology informed by philosophy The philosophy critical viewpoint, is absent Russia alone is completely the land of the philosophic cinema! therefore we may hope for much from its compoundings If the technology of the Russian film keeps up with its philosophy, a very great compound cinema will result

Warner's Camera Blimp

(Continued from page 22)

is fitted into a metal sleeve integral with the "Blimp's" frame This port-hole is therefore adjustable, and quickly and completely removeable. On it may be mounted the various filters, gauzes, mattes, etc, normally used in silent cinematography, and these may be adjusted with relation to the lens exactly as in former days, the customary sunshades etc, may be mounted in front of them leaving this whole vital assembly on the outside of the 'Blimp' and instantly accessible For use with extreme short focus lenses, the port-hole assembly may be reversed bringing the glass gauzes etc quite as close to the lens as is possible with the ordinary matte-box assembly, and leaving a clear field for the lens' wide angle

Since the complete "Blimp' is so light and since it gives such freedom to the cinematographer and sound-man alike, it is easy to see why the Warner First National technical staffs are so enthusiastic about them and knowing that enthusiasm, the industry as a whole can count it a stroke of great good fortune that these new devices are to be made generally available

Shooting an Eclipse

(Continued from page 9)

point of making a much wider use of movie facilities in our scientific work."

The scientific expedition was made possible by the co-operation of the American Society of Cinematographers Fox Film studio Hearst-Fox Movietone and Daniel B Clark, who provided the automobile that carried the party over 2000 miles of California and Nevada highways twice across the high Sierras and through 29 counties of the state

Professional Amateurs

(Continued from page 33)

at the Pathe Studio Ever since I've had the *Filmo* I've taken it on location trips with me, and sometimes to the studio as well That way, I've been able to preserve a lot of those enjoyable moments between scenes which otherwise would become just pleasant memories And we've all had so much fun doing it! In those long waits between scenes we've made little scenes of our own and whenever I showed up with the camera it's been Well, Mary, what do you want me to do today? and Hello Miss Cameraman, Have you anything for me in this scene?'

"But when I started this last picture, *Holiday*, I found it so interesting and everyone so willing to help that I grew bolder, and brought the camera out nearly every day, and set it up beside the studio cameras At first I thought I could only get the scenes that I didn't play in, but one of the assistant cameramen volunteered to be my assistant, too So after that I'd led him shoot the scenes I played in, just as I shot the others In one sequence—a big Cathedral wedding-scene I stayed in place just as long as I could shooting myself and only passed the *Filmo* over to him in time to run madly over to where I was supposed to make a dignified entrance!

'And everyone has been so kind and helpful to me! The cameramen have helped me with my exposures and compositions The sound men have been amazingly considerate too. They tell me it's lucky that my *Filmo* is so quiet, for it's enabled me to get much closer shots than I'd dared to hope for And—well, everyone in the company has been lovely about it Just the other day I was getting ready to shoot a scene and suddenly, to my amazement, one of the carpenters came up and began to set a gobo beside me to shield my lens from the glare of some lights A few minutes later, the assistant director saw that the 'extras' were blocking my field of view as they entered and left the set, so he came over and rearranged them so that I, too, could get my picture But these are only a few of the kind things everyone did for me all through the picture—things entirely apart from their regular work, and which made things so much pleasanter and happier for me And they did it all with a wonderful, friendly spirit that made me proud to be a fellow-worker of such fine people"

The famous Art-director, Boris Bilinsky, recently exhibited a series of sketches for costumes and sets made for a dozen French films, among which were *Casanova*, *Scheherezade*, *Monte-Cristo*, *The White Devil*, and *Tarakanova*, at the Galerie de France, in Paris.

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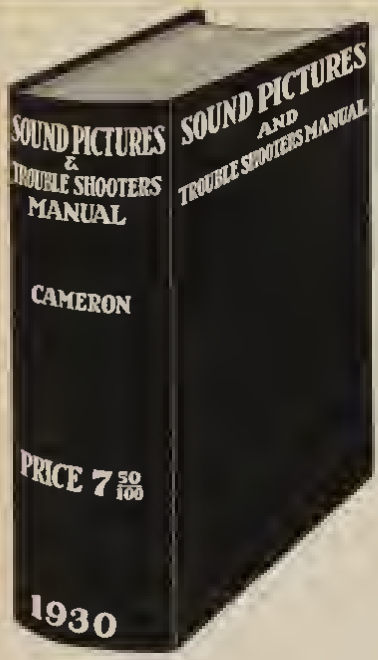

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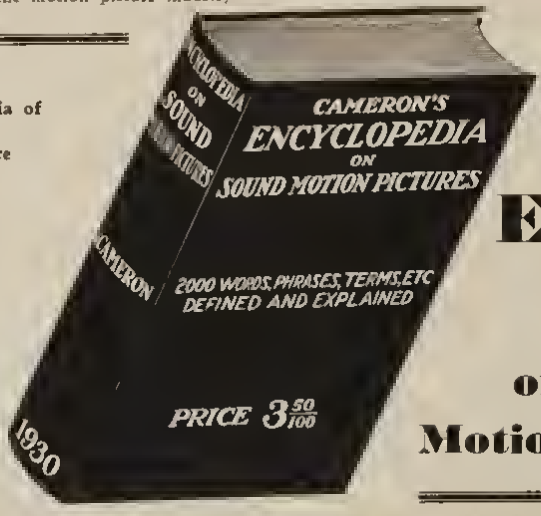

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